

## SOLICITATION, OFFER AND AWARD

1. THIS CONTRACT IS A RATED ORDER  
UNDER DPAS (15 CFR 350)

RATING

PAGE OF  
PAGES

2. CONTRACT NO.

3. SOLICITATION NO.

DACA67-01-R-0220

4. TYPE OF SOLICITATION

☐ SEALED BID (IFB)☒ NEGOTIATED (RFP)

5. DATE ISSUED

13 August 2001

6. REQUISITION PURCHASE  
NO.

DACA67-01-C0209

7. ISSUED BY

USA Engineer District, Seattle

ATTN: CENWS-CT

PO Box 3755, Seattle, WA 98124-3755

CODE

Tel: 206-764-6853

Fax: 206-764-6817

8. ADDRESS OFFER TO (If other than Item 7)

See Item 7 or Handcarry to: Seattle District, USACE

4735 E. Maginal Way South

Seattle, WA 98134

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

## SOLICITATION

9. Sealed offers in original and 1 copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located Contracting Division, 2nd Floor, Col C-5 until 2:00 PM local time 27 Aug 2001  
(Hour) (Date)CAUTION - LATE Submissions, Modifications, and Withdrawals: Section L, Provision No. 52.214-7 or 52.215-10.  
All offers are subject to all terms and conditions contained in this solicitation.10. FOR INFORMATION  
CALL:

A. NAME

Sandra Thomson

B. TELEPHONE NO. (Include area code) (NO COLLECT CALLS)  
(206)764-6865

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## OFFER (Must be fully completed by offeror)

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within \_\_\_\_\_ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT  
(See Section I, Clause No. 52.232-8)

10 CALENDAR DAYS

20 CALENDAR DAYS

30 CALENDAR DAYS

CALENDAR DAYS

/ %

%

%

%

14. ACKNOWLEDGMENT OF AMENDMENTS

(The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated:

AMENDMENT NO.

DATE

AMENDMENT NO.

DATE

15A. NAME  
AND  
ADDRESS  
OF  
OFFEROR

CODE

FACILITY

Cascade Drilling Inc  
PO Box 1184  
Woodinville WA 98072

16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN

OFFER (Type or print)

Bruce Niermeyer  
President

15B. TELEPHONE NO. (Include area code)

15C. CHECK IF REMITTANCE ADDRESS  
IS DIFFERENT FROM ABOVE - ENTER  
SUCH ADDRESS IN SCHEDULE.

17. SIGNATURE

Bruce

18. OFFER DATE

8/29/01

## AWARD (To be completed by Government)

19. ACCEPTED AS TO ITEMS NUMBERED  
0001 thru 0006

20. AMOUNT

\$1,023,340.00

21. ACCOUNTING AND APPROPRIATION

SEE SECTION B.

22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION:

☐ 10 U.S.C. 2304(c) ( )☐ 10 U.S.C. 253(c) ( )23. SUBMIT INVOICES TO ADDRESS SHOWN IN  
(4 copies unless otherwise specified)

ITEM

SEE SECTION G

24. ADMINISTERED BY (If other than Item 7)

CODE

25. PAYMENT WILL BE MADE BY  
US Army Corps of Engineers Finance Center  
CEFC-AO-P

5722 Integrity Drive, Millington, TN 38054-5004

26. NAME OF CONTRACTING OFFICER (Type or print)

27. UNITED STATES OF AMERICA

CHERYL A. ANDERSON

(Signature of Contracting Officer)

28. AWARD DATE

28 Sept 2001

IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

NSN 7540-01-152-8064

PREVIOUS EDITION NOT USABLE

PerFORM (DLA)

STANDARD FORM 33 (Rev. 4-85)  
Prescribed by GSA

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**ALTERATIONS IN CONTRACT (FAR 52.252-4)(APR 1984)**

**Portions of this contract are altered as follows:**

- 1. Items accepted for Contract Award are the Base Items. Options Items 0004 thru 0006**
- 2. The total contract amount obligated as stated in Section G, paragraph G.3. "Accounting And Appropriation Data", is \$ 1,023,340.00. The Accounting and Appropriation data is as follows:**

21200120200000	088082	252G001THK	NA	\$327.840.00
21200120200000	088082	252G001TCS	NA	\$71500.00
21200120200000	088082	252G3LHD73	NA	\$18,932.00
21200120200000	088082	252G 3G4DDK	NA	\$80,000.00
21200120200000	088082	252G 3LHD73	NA	\$515868.00
21200120200000	088082	252G001TCS	NA	\$9200.00

- 3. The Contracting Officer's Representative is Dave Roden at 206-764-3448.**

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IF THE CONTRACTOR IS A CORPORATION OR PARTNERSHIP, THE **APPLICABLE PORTION OF THE FORM** LISTED BELOW MUST BE COMPLETED. IN THE ALTERNATIVE, OTHER EVIDENCE MUST BE SUBMITTED TO SUBSTANTIATE THE AUTHORITY OF THE PERSON SIGNING THE CONTRACT. IF A CORPORATION, THE SAME OFFICER SHALL NOT EXECUTE BOTH THE CONTRACT AND THE CERTIFICATE.

### CORPORATE CERTIFICATE

I, Bruce Niermeyer, certify that I am the \_\_\_\_\_ Secretary of the Corporation named as Contractor herein; that Bruce Niermeyer who signed this contract on behalf of the Contractor was then President of said corporation; that said contract was duly signed for and on behalf of said corporation by authority of its governing body and is within the scope of its corporate powers.

Bruce Niermeyer (CORPORATE SEAL)  
(Secretary)

Sole Corporate Officer

### AUTHORITY TO BIND PARTNERSHIP

This is to certify that the names, signatures and Social Security Numbers of all partners are listed below and that the person signing the contract has authority actually to bind the partnership pursuant to its partnership agreements. Each of the partners individually has full authority to enter into and execute contractual instruments on behalf of said partnership with the United States of America, except as follows: (state "none" or describe limitations, if any)

This authority shall remain in full force and effect until such time as the revocation of authority by any cause whatsoever has been furnished in writing to, and acknowledged by, the Contracting Officer.

(Names, Signatures and Social Security Numbers of all Partners)

NAME	SIGNATURE	SOCIAL SECURITY NO.
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

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## SECTION B

## SUPPLIES OR SERVICES AND PRICES/COSTS

<u>Item No.</u>	<u>Description of Item</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Amount</u>
BASE ITEMS					
0001	Sonic Drilling With Continuous Coring And Installation Of Monitoring Wells In Selected Soil Borings of Upper Aquifer (East Gate Disposal Yard, wells not to exceed 120 feet depth), Fort Lewis, WA In Accordance With The Scope Of Work, Drawings, And All Provisions Herein. Contractor Shall Furnish All Labor, Materials, And Equipment As Specified.				NSP
0001AA	Mobilization/Demobilization	1	Job	LS	\$ <u>17,000</u>
0001AB	Sonic Drill Rig Rental and Crew	400	HR	\$ <u>450</u>	\$ <u>180,000</u>
0001AC	Decommission Soil Borings	200	LF	\$ <u>30</u>	\$ <u>6,000</u>
0001AD	Install 4 Shallow PVC Monitoring Wells, each not to exceed 25 feet depth	100	LF	\$ <u>36</u>	\$ <u>3,600</u>
0001AE	Install 4 PVC Monitoring Wells, each not to exceed 40 feet depth	160	LF	\$ <u>34</u>	\$ <u>5,440</u>
0001AF	Install 11 each Upper Aquifer Multi-port Monitoring Wells, each not to exceed 120 feet depth	1,300	LF	\$ <u>65</u>	\$ <u>84,500</u>
0001AG	Monitoring Well Development	100	HR	\$ <u>125</u>	\$ <u>12,500</u>
0001AH	Standby Time, Equipment only	40	HR	\$ <u>425</u>	\$ <u>17,000</u>
0001AI	Upgrade to Personal Protection Level C	40	HR	\$ <u>45</u>	\$ <u>1,800</u>

## SECTION B (CON'T)

## SUPPLIES OR SERVICES AND PRICES/COSTS

<u>Item No.</u>	<u>Description of Item</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Amount</u>
BASE ITEMS					
0002	Sonic Drilling With Continuous Coring And Installation Of Multi-port Monitoring Wells In Lower Aquifer (Wells not to exceed 300 feet depth), Fort Lewis, WA In Accordance With The Scope Of Work, Drawings, And All Provisions Herein. Contractor Shall Furnish All Labor, Materials, And Equipment As Specified.				NSP
0002AA	Sonic Drill Rig Rental and Crew	180	HR	\$ <u>450</u>	\$ <u>81,000</u>
0002AB	Install 5 each Lower Aquifer Multi-port Monitoring Wells, each not to exceed 300 feet depth	1,250	LF	\$ <u>65</u>	\$ <u>81,250</u>
0002AC	Monitoring Well Development	50	HR	\$ <u>125</u>	\$ <u>6,250</u>
0002AD	Standby Time, Equipment only	20	HR	\$ <u>425</u>	\$ <u>8,500</u>
0003	Contract Data (See DD Form 1423)				NSP
TOTAL ALL BASE ITEMS 0001AA THROUGH 0003					\$ <u>504,840</u>



## SECTION B (CON'T)

## SUPPLIES OR SERVICES AND PRICES/COSTS

## OPTIONAL ITEM

				NSP	
0004	Additional Upper Aquifer Multi-port Monitoring Wells (Landfill 4)				
0004AA	Mobilization/Demobilization	1	Job	LS	\$ <u>0</u>
0004AB	Sonic Drill Rig Rental and Crew	80	HR	\$ <u>450</u>	\$ <u>36,000</u>
0004AC	Install 4 each Upper Aquifer Multi-port Monitoring Wells, each not to exceed 120 feet depth	480	LF	\$ <u>0.65</u>	\$ <u>31,200</u>
0004AD	Monitoring Well Development	40	HR	\$ <u>125</u>	\$ <u>5,000</u>
0004AE	Standby Time, Equipment only	20	HR	\$ <u>425</u>	\$ <u>8,500</u>

TOTAL FOR OPTIONAL LINE ITEMS 0004AA THROUGH 0004AE

\$ 80,700

## SECTION B (CON'T)

## SUPPLIES OR SERVICES AND PRICES/COSTS

## OPTIONAL ITEM

				NSP	
0005	Additional Lower Aquifer Multi-port Monitoring Wells				
0005AA	Mobilization/Demobilization	1	Job	LS	\$ <u>0</u>
0005AB	Sonic Drill Rig Rental and Crew	180	HR	\$ <u>450</u>	\$ <u>81,000</u>
0005AC	Install 5 each Lower Aquifer Multi-port Monitoring Wells, each not to exceed 300 feet depth	1,250	LF	\$ <u>65</u>	\$ <u>81,250</u>
0005AD	Monitoring Well Development	50	HR	\$ <u>125</u>	\$ <u>6,250</u>
0005AE	Standby Time, Equipment only	20	HR	\$ <u>425</u>	\$ <u>8,500</u>

TOTAL FOR OPTIONAL LINE ITEMS 0005AA THROUGH 0005AE

\$ 177,000

## SECTION B (CON'T)

## SUPPLIES OR SERVICES AND PRICES/COSTS

## OPTIONAL ITEM

					NSP
0006	Lower Aquifer Conventional Monitoring Wells				
0006AA	Mobilization/Demobilization	1	Job	LS	\$ <u>2</u>
0006AB	Sonic Drill Rig Rental and Crew	280	HR	\$ <u>450</u>	\$ <u>126,000</u>
0006AC	Install 8 each Lower Aquifer Conventional Monitoring Wells, each not to exceed 300 feet depth	1,920	LF	\$ <u>65</u>	\$ <u>124,800</u>
0006AD	Monitoring Well Development	80	HR	\$ <u>125</u>	\$ <u>10,000</u>
TOTAL FOR OPTIONAL LINE ITEMS 0006AA THROUGH 0006AD					\$ <u>260,800</u>
TOTAL FOR ALL OPTIONAL LINE ITEMS 0004AA THROUGH 0006AD					\$ <u>518,500</u>
TOTAL PRICE FOR ALL ITEMS 0001AA THROUGH 0006AD					\$ <u>1,023,390</u>

## Notes:

(1) NSP - not separately priced on that line

(2) Bids shall not be submitted for quantities less than those specified for each line item. Bidders shall offer a bid on all line items of the Schedule. Failure to include pricing for all quantities of all line items will result in rejection of the bid as nonresponsive.

(3) QUANTITIES: The quantities shown in Section B are estimated for use in evaluating offers only. Payment will be made for actual quantities. (See Section C, Technical Specifications, Section 01270, Measurement and Payment.)

(4) See Section M, Evaluation Factors for Award.

Award shall be issued pursuant to the small business competitiveness demonstration program.

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## SECTION C – DESCRIPTION/SPECS./WORK STATEMENT

### 1. Specifications and Drawings.

Specifications and Drawings, Solicitation No. DACA67-01-R-0220, cover the detailed requirements for the equipment and services listed in the schedule and are attached hereto and made a part thereof under Section J LIST OF ATTACHMENTS EXHIBITS AND OTHER DOCUMENTS.

### 2. Changes in Specifications and Drawings.

The right is reserved as the interest of the Government may require, to revise or amend the specifications and/or drawings prior to the date set for opening bids. Such revisions and amendments, if any, will be announced by amendments to this solicitation. Copies of such amendments will be furnished to all prospective bidders. If the revisions and amendments are of a nature which require material changes in quantities or prices bid or both, the date set for opening bids may be postponed by such number of days as in the opinion of the District Engineer will enable the bidders to revise their bids. In such cases, the amendment will include the announcement of the new date for opening bids.

3. Site Visit. A site visit is recommended though not required. If the Contractor would like to schedule a site visit the Government's point of contact for the site is Mr. Bill Goss at telephone (206) 764-3267.

01022  
Sonic Drilling for Soil Borings and Monitoring Well Installation,  
Fort Lewis, Washington

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## SECTION E Inspection and Acceptance

## CLAUSES INCORPORATED BY FULL TEXT

## 52.246-4 INSPECTION OF SERVICES--FIXED-PRICE (AUG 1996)

- (a) Definitions. "Services," as used in this clause, includes services performed, workmanship, and material furnished or utilized in the performance of services.
- (b) The Contractor shall provide and maintain an inspection system acceptable to the Government covering the services under this contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Government during contract performance and for as long afterwards as the contract requires.
- (c) The Government has the right to inspect and test all services called for by the contract, to the extent practicable at all times and places during the term of the contract. The Government shall perform inspections and tests in a manner that will not unduly delay the work.
- (d) If the Government performs inspections or tests on the premises of the Contractor or a subcontractor, the Contractor shall furnish, and shall require subcontractors to furnish, at no increase in contract price, all reasonable facilities and assistance for the safe and convenient performance of these duties.
- (e) If any of the services do not conform with contract requirements, the Government may require the Contractor to perform the services again in conformity with contract requirements, at no increase in contract amount. When the defects in services cannot be corrected by reperformance, the Government may (1) require the Contractor to take necessary action to ensure that future performance conforms to contract requirements and (2) reduce the contract price to reflect the reduced value of the services performed.
- (f) If the Contractor fails to promptly perform the services again or to take the necessary action to ensure future performance in conformity with contract requirements, the Government may (1) by contract or otherwise, perform the services and charge to the Contractor any cost incurred by the Government that is directly related to the performance of such service or (2) terminate the contract for default.

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## SECTION F Deliveries or Performance

## CLAUSES INCORPORATED BY FULL TEXT

## 52.242-15 STOP-WORK ORDER (AUG 1989)

(a) The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall either--

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if--

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; provided, that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

## 52.242-17 GOVERNMENT DELAY OF WORK (APR 1984)

(a) If the performance of all or any part of the work of this contract is delayed or interrupted (1) by an act of the Contracting Officer in the administration of this contract that is not expressly or impliedly authorized by this contract, or (2) by a failure of the Contracting Officer to act within the time specified in this contract, or within a reasonable time if not specified, an adjustment (excluding profit) shall be made for any increase in the cost of performance of this contract caused by the delay or interruption and the contract shall be modified in writing accordingly. Adjustment shall also be made in the delivery or performance dates and any other contractual term or condition affected by the delay or interruption. However, no adjustment shall be made under this clause for any delay or interruption to the extent that performance would have been delayed or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an adjustment is provided or excluded under any other term or condition of this contract.

(b) A claim under this clause shall not be allowed (1) for any costs incurred more than 20 days before the Contractor

shall have notified the Contracting Officer in writing of the act or failure to act involved, and (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the delay or interruption, but not later than the day of final payment under the contract.

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## SECTION F DELIVERIES OR PERFORMANCE

### F.1 PERFORMANCE AND COMPLETION PERIOD(S)

(a) The Contract awarded hereunder shall commence on date of award and services shall be performed according to the following schedule:

#### Schedule

Item of Work	Date
(A) Start field activities	on or about 24 September 2001 <sup>1/</sup>
(B) Completion of all field work (except option items)	Not later than 15 July 2002 <sup>1/2/</sup>
(C) Completion of CLIN* Nos. 0004 through 0006 (Optional Items)	360 calendar days after award of option <sup>2/</sup>

<sup>1/</sup> The completion date is based on the assumption that the successful offeror will receive the notice to proceed by 14 September, 2001. The completion date will be extended by the number of calendar days after the above date that the Contractor receives the notice to proceed, except to the extent that the delay in issuance of the notice to proceed results from the failure of the Contractor to execute the Contract and give the required performance and payment bonds within the time specified in the offer.

<sup>2/</sup> The time stated for completion shall include final cleanup of the premises of all installation work related activities including debris and waste and submittal of all specified records, reports, and data.

\*Contract line item number

### F.2 OPTION FOR INCREASED QUANTITY (MAR 1989) (FAR 52.211-6)

(a.) The Government may increase the quantity of work awarded by exercising the Optional Bid Item(s) at any time, or not at all, but no later than 14 June 2002. Notice to proceed on work Item(s) added by exercise of the option(s) will be concurrent with award of option(s).

(b.) The parties hereto further agree that any option herein shall be considered to have been exercised at the time the Government deposits written notification to the Contractor in the mails.

### F.3 PLACE OF PERFORMANCE

Installation and Services under this contract are required to be performed at the following location:  
Fort Lewis, Washington.

01022  
Sonic Drilling for Soil Borings and Monitoring Well Installation,  
Fort Lewis, Washington

#### F.4 MEASUREMENT AND PAYMENT

See Section 01270 Measurement and Payment (under Section J, Attachment J5).

END OF SECTION F

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SECTION G Contract Administration Data

CONTRACT ADMINISTRATION DATA

1. CONTRACT ADMINISTRATOR: Contract will be administered by:

Seattle District, Corps of Engineers  
CENWS-CT-CB-CU  
P. O. Box 3755  
Seattle, WA 98134-2385

Name: Sandra Thomson  
Telephone: (206) 764-6865

Authorized Contracting Officer's Representative:

Will be provided at time of contract award.

2. INVOICE SUMITTAL:

The contractor shall submit invoices for payment as follows:

Original & 2 copies:

US Army Corps of Engineers Finance Center  
Attn: CEFC-AO-P  
5720 Integrity Drive  
Millington, TN 38054-5005

One copy to:

Corps of Engineers  
Attn: CENWS-PM-EM (D. Roden)  
P. O. Box 3755  
Seattle, WA 98134-2385

Payment will be made by:

US Army Corps of Engineers Finance Center  
ATTN: CEFC-AO-P  
5720 Integrity Drive  
Millington, TN 38054-5005

See Section C for additional invoice and payment information.

3. ACCOUNTING AND APPROPRIATION DATA:

Will be provided at time of contract award.

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## SECTION H

### SPECIAL CONTRACT REQUIREMENTS

#### INDEX

H-1	COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK
H-2	PROVISION ON CONTRACTING OFFICER'S AUTHORITY.
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H-8	SERVICES BEYOND THE ORIGINAL SCOPE OF WORK
H-9	CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS

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## SECTION H

### SPECIAL CONTRACT REQUIREMENTS

#### H-1 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK

See Section F DELIVERIES OR PERFORMANCE, under paragraph, "Performance And Completion Periods" for requirements.

#### H-2 PROVISION ON CONTRACTING OFFICER'S AUTHORITY

No oral statement of any person whomever shall, in any manner or degree, modify or otherwise affect the terms of this contract. The Contracting Officer, or his authorized representative is the only person authorized to approve changes in any of the requirements and/or terms of this contract and notwithstanding terms contained elsewhere, the said authority remains solely with the Contracting Officer. In the event the contractor effects a change at the direction of any person other than the Contracting Officer, or his authorized representative, the change will be considered to have been made without authority, and no adjustment will be made in the contract price to cover any increase in costs incurred.

#### H-3 SUBCONTRACTOR

(a.) Provisions in Subcontract. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relating to this contract, and insure sufficient fulfillment by subcontractors of all contractual provisions.

(b.) Relationship Between Subcontractor and Government. Nothing contained in this contract shall be construed as a contractual relationship between any subcontractor and the Government.

#### H-4 SITE CONDITIONS

(a.) Transportation Facilities. The Contractor shall make its own investigation of the conditions of existing public and private roads and of clearances, restrictions, bridge load limits and other limitations affecting transportation and ingress and egress at the job site.

(b.) The Contractor may transport onto the site, such necessary temporary facilities as trailers for field offices and storage, to be located where approved by the Contracting Officer.

#### H-5 SUPERVISION

The Government shall not exercise any supervision or control over the contractor's employees performing services under this contract. Such employees shall be accountable not to the Government, but solely to the contractor, who in turn, is responsible to the Government.

H-6 INSURANCE - WORK ON A GOVERNMENT INSTALLATION (SEP 1989) (FAR 52.228-5)

(a) The Contractor shall, at its own expense, provide and maintain during the entire performance period of this Contract at least the kinds and minimum amounts of insurance required in the Insurance Liability Schedule or elsewhere in the Contract.

(b) Before commencing work under this Contract, the Contractor shall certify to the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective:

(1) for such period as the laws of the State in which this Contract is to be performed prescribe;  
or

(2) until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

(c) The Contractor shall insert the substance of this clause, including this paragraph (c), in subcontracts under this Contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Schedule or elsewhere in the Contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

(d) Insurance Liability Schedule (FAR 28.307-2)

(1) Workers' compensation and employer's liability. Contractors are required to comply with applicable Federal and State workers' compensation and occupational disease statutes. If occupational diseases are not compensable under those statutes, they shall be covered under the employer's liability section of the insurance policy, except when Contract operations are so commingled with a Contractor's commercial operation that it would not be practical to require this coverage. Employer's liability coverage of at least \$100,000 shall be required, except in states with exclusive or monopolistic funds that do not permit workers' compensation to be written by private carriers.

(2) General Liability.

(a) The Contracting Officer shall require bodily injury liability insurance coverage written on the comprehensive form of policy of at least \$500,000 per occurrence.

(b) Property damage liability insurance shall be required only in special circumstances as determined by the agency.

(3) Automobile liability. The Contracting Officer shall require automobile liability insurance written on the comprehensive form of policy. The policy shall provide for bodily injury and property damage liability covering the operation of all automobiles used in connection with performing the Contract. Policies covering automobiles operated in the United States shall provide coverage of at least \$200,000 per

person and \$500,000 per occurrence for bodily injury and \$20,000 per occurrence for property damage. The amount of liability coverage on other policies shall be commensurate with any legal requirements of the locality and sufficient to meet normal and customary claims.

(4) Environmental Liability If this contract includes the transport, storage, or disposal of hazardous material waste the following coverage is required.

The Contractor shall ensure the transporter and disposal facility have liability insurance in effect for claims arising out of the death or bodily injury and property damage from hazardous material/waste transport, treatment, storage and disposal, including vehicle liability and legal defense costs in the amount of \$1,000,000.00 as evidenced by a certificate of insurance for General, Automobile, and Environmental Liability Coverage. Proof of this insurance shall be provided to the Contracting Officer.

#### H-7 APPROVALS BY GOVERNMENT

Unless expressly stipulated elsewhere in this contract as being excepted from this provision, wherever this contract provides for submittal of designs, components, or other items for approval of the Contracting Officer or other authorized Government representative, such approvals shall not be construed as a complete check as to the adequacy of said design or item, nor as an agreement that the design or item will meet the requirements of the Performance Work Statement. Such approvals are for the purpose of ensuring Government knowledge of Contractor's plans and progress and will indicate only that the Contractor's general approach toward meeting contractual requirements is satisfactory. Such approvals shall in no way relieve the Contractor of the responsibility for any error or deficiency which may exist in the submitted design or other item, as the Contractor shall be responsible for meeting all the requirements of the contract.

#### H-8 SERVICES BEYOND THE ORIGINAL SCOPE OF WORK

The Contractor is advised not to perform any extra services under this contract requested by any person, orally or in writing, which the Contractor considers to be a change in work or services required and which necessitates an adjustment in the contract price, until the Contractor has been requested by the Contracting Officer to: (a) review a supplemental Scope of Work; (b) make a written proposal covering such extra services; and (c) has negotiated a mutually satisfactory price and received a written modification signed by the Contracting Officer. Any such extra services executed by the Contractor without the appropriate written notice is undertaken at its own risk and expense.

#### H-9 CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS (OCT 1996) (52.0236-4001 EBS)

(a) The Government--

(1) Will provide the Contractor, without charge, one set of contract drawings (if applicable) and one set of specifications in electronic format on a compact disk. The Government will not give the Contractor any hard copy paper drawings or specifications for any contract resulting from this solicitation.

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Sonic Drilling for Soil Borings and Monitoring Well Installation,  
Fort Lewis, Washington

(b) The work shall conform to the specifications (under Section J, Attachment J5) and the contract drawings identified in the index of drawings (under Section J, Attachment J3).

END OF SPECIAL CONTRACT REQUIREMENTS

## SECTION I Contract Clauses

## CLAUSES INCORPORATED BY FULL TEXT

## 52.202-1 DEFINITIONS. (MAY 2001)

(a) Agency head or head of the agency means the Secretary (Attorney General, Administrator, Governor, Chairperson, or other chief official, as appropriate) of the agency, unless otherwise indicated, including any deputy or assistant chief official of the executive agency.

(b) Commercial component means any component that is a commercial item.

(c) Commercial item means--

(1) Any item, other than real property, that is of a type customarily used for nongovernmental purposes and that--

(i) Has been sold, leased, or licensed to the general public; or

(ii) Has been offered for sale, lease, or license to the general public;

(2) Any item that evolved from an item described in paragraph (c)(1) of this clause through advances in technology or performance and that is not yet available in the commercial marketplace, but will be available in the commercial marketplace in time to satisfy the delivery requirements under a Government solicitation;

(3) Any item that would satisfy a criterion expressed in paragraphs (c)(1) or (c)(2) of this clause, but for--

(i) Modifications of a type customarily available in the commercial marketplace; or

(ii) Minor modifications of a type not customarily available in the commercial marketplace made to meet Federal Government requirements. "Minor" modifications means modifications that do not significantly alter the nongovernmental function or essential physical characteristics of an item or component, or change the purpose of a process. Factors to be considered in determining whether a modification is minor include the value and size of the modification and the comparative value and size of the final product. Dollar values and percentages may be used as guideposts, but are not conclusive evidence that a modification is minor;

(4) Any combination of items meeting the requirements of paragraphs (c)(1), (2), (3), or (5) of this clause that are of a type customarily combined and sold in combination to the general public;

(5) Installation services, maintenance services, repair services, training services, and other services if such services are procured for support of an item referred to in paragraphs (c)(1), (2), (3), or (4) of this clause, and if the source of such services--

(i) Offers such services to the general public and the Federal Government contemporaneously and under similar terms and conditions; and

(ii) Offers to use the same work force for providing the Federal Government with such services as the source uses for providing such services to the general public;

(6) Services of a type offered and sold competitively in substantial quantities in the commercial marketplace based on established catalog or market prices for specific tasks performed under standard commercial terms and conditions. This does not include services that are sold based on hourly rates without an established catalog or market price for a specific service performed;

(7) Any item, combination of items, or service referred to in subparagraphs (c)(1) through (c)(6), notwithstanding the fact that the item, combination of items, or service is transferred between or among separate divisions, subsidiaries, or affiliates of a Contractor; or

(8) A nondevelopmental item, if the procuring agency determines the item was developed exclusively at private expense and sold in substantial quantities, on a competitive basis, to multiple State and local Governments.

(d) Component means any item supplied to the Government as part of an end item or of another component, except that for use in 52.225-9, and 52.225-11 see the definitions in 52.225-9(a) and 52.225-11(a).

(e) Contracting Officer means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer.

(f) Nondevelopmental item means--

(1) Any previously developed item of supply used exclusively for governmental purposes by a Federal agency, a State or local government, or a foreign government with which the United States has a mutual defense cooperation agreement;

(2) Any item described in paragraph (f)(1) of this definition that requires only minor modification or modifications of a type customarily available in the commercial marketplace in order to meet the requirements of the procuring department or agency; or

(3) Any item of supply being produced that does not meet the requirements of paragraph (f)(1) or (f)(2) solely because the item is not yet in use.

(g) Except as otherwise provided in this contract, the term "subcontracts" includes, but is not limited to, purchase orders and changes and modifications to purchase orders under this contract.

(End of clause)

#### 52.203-3 GRATUITIES (APR 1984)

(a) The right of the Contractor to proceed may be terminated by written notice if, after notice and hearing, the agency head or a designee determines that the Contractor, its agent, or another representative--

(1) Offered or gave a gratuity (e.g., an entertainment or gift) to an officer, official, or employee of the Government; and

(2) Intended, by the gratuity, to obtain a contract or favorable treatment under a contract.

(b) The facts supporting this determination may be reviewed by any court having lawful jurisdiction.

(c) If this contract is terminated under paragraph (a) of this clause, the Government is entitled--

(1) To pursue the same remedies as in a breach of the contract; and

(2) In addition to any other damages provided by law, to exemplary damages of not less than 3 nor more than 10 times the cost incurred by the Contractor in giving gratuities to the person concerned, as determined by the agency head or a designee. (This subparagraph (c)(2) is applicable only if this contract uses money appropriated to the Department of Defense.)

(d) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to



any other rights and remedies provided by law or under this contract.

(End of clause)

#### 52.203-5 COVENANT AGAINST CONTINGENT FEES (APR 1984)

(a) The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of the contingent fee.

(b) "Bona fide agency," as used in this clause, means an established commercial or selling agency, maintained by a contractor for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds itself out as being able to obtain any Government contract or contracts through improper influence.

"Bona fide employee," as used in this clause, means a person, employed by a contractor and subject to the contractor's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds out as being able to obtain any Government contract or contracts through improper influence.

"Contingent fee," as used in this clause, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Government contract.

"Improper influence," as used in this clause, means any influence that induces or tends to induce a Government employee or officer to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

(End of clause)

#### 52.203-6 RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT (JUL 1995)

(a) Except as provided in (b) of this clause, the Contractor shall not enter into any agreement with an actual or prospective subcontractor, nor otherwise act in any manner, which has or may have the effect of restricting sales by such subcontractors directly to the Government of any item or process (including computer software) made or furnished by the subcontractor under this contract or under any follow-on production contract.

(b) The prohibition in (a) of this clause does not preclude the Contractor from asserting rights that are otherwise authorized by law or regulation.

(c) The Contractor agrees to incorporate the substance of this clause, including this paragraph (c), in all subcontracts under this contract which exceed \$100,000.

#### 52.203-7 ANTI-KICKBACK PROCEDURES. (JUL 1995)

(a) Definitions.

"Kickback," as used in this clause, means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided, directly or indirectly, to any prime Contractor, prime Contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a subcontract relating to a prime contract.

"Person," as used in this clause, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.

"Prime contract," as used in this clause, means a contract or contractual action entered into by the United States for the purpose of obtaining supplies, materials, equipment, or services of any kind.

"Prime Contractor," as used in this clause, means a person who has entered into a prime contract with the United States.

"Prime Contractor employee," as used in this clause, means any officer, partner, employee, or agent of a prime Contractor.

"Subcontract," as used in this clause, means a contract or contractual action entered into by a prime Contractor or subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind under a prime contract.

"Subcontractor," as used in this clause, (1) means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a subcontract entered into in connection with such prime contract, and (2) includes any person who offers to furnish or furnishes general supplies to the prime Contractor or a higher tier subcontractor.

"Subcontractor employee," as used in this clause, means any officer, partner, employee, or agent of a subcontractor.

(b) The Anti-Kickback Act of 1986 (41 U.S.C. 51-58) (the Act), prohibits any person from -

(1) Providing or attempting to provide or offering to provide any kickback;

(2) Soliciting, accepting, or attempting to accept any kickback; or

(3) Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime Contractor to the United States or in the contract price charged by a subcontractor to a prime Contractor or higher tier subcontractor.

(c)(1) The Contractor shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in paragraph (b) of this clause in its own operations and direct business relationships.

(2) When the Contractor has reasonable grounds to believe that a violation described in paragraph (b) of this clause may have occurred, the Contractor shall promptly report in writing the possible violation. Such reports shall be made to the inspector general of the contracting agency, the head of the contracting agency if the agency does not have an inspector general, or the Department of Justice.

(3) The Contractor shall cooperate fully with any Federal agency investigating a possible violation described in paragraph (b) of this clause.

(4) The Contracting Officer may (i) offset the amount of the kickback against any monies owed by the United States under the prime contract and/or (ii) direct that the Prime Contractor withhold, from sums owed a subcontractor under the prime contract, the amount of any kickback. The Contracting Officer may order the monies withheld under subdivision (c)(4)(ii) of this clause be paid over to the Government unless the Government has already offset those monies under subdivision (c)(4)(i) of this clause. In either case, the Prime Contractor shall notify the Contracting Officer when the monies are withheld.

(5) The Contractor agrees to incorporate the substance of this clause, including this subparagraph (c)(5) but excepting subparagraph (c)(1), in all subcontracts under this contract which exceed \$100,000.

52.203-8 CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

(a) If the Government receives information that a contractor or a person has engaged in conduct constituting a violation of subsection (a), (b), (c), or (d) of Section 27 of the Office of Federal Procurement Policy Act (41 U.S.C. 423) (the Act), as amended by section 4304 of the 1996 National Defense Authorization Act for Fiscal Year 1996 (Pub. L. 104-106), the Government may--

(1) Cancel the solicitation, if the contract has not yet been awarded or issued; or

(2) Rescind the contract with respect to which--

(i) The Contractor or someone acting for the Contractor has been convicted for an offense where the conduct constitutes a violation of subsection 27 (a) or (b) of the Act for the purpose of either--

(A) Exchanging the information covered by such subsections for anything of value; or

(B) Obtaining or giving anyone a competitive advantage in the award of a Federal agency procurement contract; or

(ii) The head of the contracting activity has determined, based upon a preponderance of the evidence, that the Contractor or someone acting for the Contractor has engaged in conduct constituting an offense punishable under subsections 27(e)(1) of the Act.

(b) If the Government rescinds the contract under paragraph (a) of this clause, the Government is entitled to recover, in addition to any penalty prescribed by law, the amount expended under the contract.

(c) The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law, regulation, or under this contract.

52.203-10 PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

(a) The Government, at its election, may reduce the price of a fixed-price type contract and the total cost and fee under a cost-type contract by the amount of profit or fee determined as set forth in paragraph (b) of this clause if the head of the contracting activity or designee determines that there was a violation of subsection 27 (a), (b), or (c) of the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 423), as implemented in section 3.104 of the Federal Acquisition Regulation.

(b) The price or fee reduction referred to in paragraph (a) of this clause shall be--

(1) For cost-plus-fixed-fee contracts, the amount of the fee specified in the contract at the time of award;

(2) For cost-plus-incentive-fee contracts, the target fee specified in the contract at the time of award, notwithstanding any minimum fee or "fee floor" specified in the contract;

(3) For cost-plus-award-fee contracts--

(i) The base fee established in the contract at the time of contract award;

(ii) If no base fee is specified in the contract, 30 percent of the amount of each award fee otherwise payable to the Contractor for each award fee evaluation period or at each award fee determination point.

(4) For fixed-price-incentive contracts, the Government may--

(i) Reduce the contract target price and contract target profit both by an amount equal to the initial target profit specified in the contract at the time of contract award; or

(ii) If an immediate adjustment to the contract target price and contract target profit would have a significant adverse impact on the incentive price revision relationship under the contract, or adversely affect the contract financing provisions, the Contracting Officer may defer such adjustment until establishment of the total final price of the contract. The total final price established in accordance with the incentive price revision provisions of the contract shall be reduced by an amount equal to the initial target profit specified in the contract at the time of contract award and such reduced price shall be the total final contract price.

(5) For firm-fixed-price contracts, by 10 percent of the initial contract price or a profit amount determined by the Contracting Officer from records or documents in existence prior to the date of the contract award.

(c) The Government may, at its election, reduce a prime contractor's price or fee in accordance with the procedures of paragraph (b) of this clause for violations of the Act by its subcontractors by an amount not to exceed the amount of profit or fee reflected in the subcontract at the time the subcontract was first definitively priced.

(d) In addition to the remedies in paragraphs (a) and (c) of this clause, the Government may terminate this contract for default. The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

#### 52.203-12 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (JUN 1997)

(a) Definitions.

"Agency," as used in this clause, means executive agency as defined in 2.101.

"Covered Federal action," as used in this clause, means any of the following Federal actions:

(1) The awarding of any Federal contract.

(2) The making of any Federal grant.

(3) The making of any Federal loan.

(4) The entering into of any cooperative agreement.

(5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

"Indian tribe" and "tribal organization," as used in this clause, have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) and include Alaskan Natives.

"Influencing or attempting to influence," as used in this clause, means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

"Local government," as used in this clause, means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a

special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency," as used in this clause, includes the following individuals who are employed by an agency:

- (1) An individual who is appointed to a position in the Government under title 5, United States Code, including a position under a temporary appointment.
- (2) A member of the uniformed services, as defined in subsection 101(3), title 37, United States Code.
- (3) A special Government employee, as defined in section 202, title 18, United States Code.
- (4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, title 5, United States Code, appendix 2.

"Person," as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit, or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation," as used in this clause, means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment," as used in this clause, means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient," as used in this clause, includes the Contractor and all subcontractors. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed," as used in this clause, means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State," as used in this clause, means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibitions.

(1) Section 1352 of title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan, or cooperative agreement from using appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.

(2) The Act also requires Contractors to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person

for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.

(3) The prohibitions of the Act do not apply under the following conditions:

(i) Agency and legislative liaison by own employees.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

(B) For purposes of subdivision (b)(3)(i)(A) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.

(C) The following agency and legislative liaison activities are permitted at any time where they are not related to a specific solicitation for any covered Federal action:

(1) Discussing with an agency the qualities and characteristics (including individual demonstrations) of the person's products or services, conditions or terms of sale, and service capabilities.

(2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(D) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action--

(1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

(2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and

(3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Pub. L. 95-507, and subsequent amendments.

(E) Only those services expressly authorized by subdivision (b)(3)(i)(A) of this clause are permitted under this clause.

(ii) Professional and technical services.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of--

(1) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.

(2) Any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or

pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(B) For purposes of subdivision (b)(3)(ii)(A) of this clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.

(D) Only those services expressly authorized by subdivisions (b)(3)(ii)(A)(1) and (2) of this clause are permitted under this clause.

(E) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

(c) Disclosure.

(1) The Contractor who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, OMB standard form LLL, Disclosure of Lobbying Activities, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph (b)(1) of this clause, if paid for with appropriated funds.

(2) The Contractor shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under subparagraph (c)(1) of this clause. An event that materially affects the accuracy of the information reported includes--

(i) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(ii) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

(iii) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(3) The Contractor shall require the submittal of a certification, and if required, a disclosure form by any person who requests or receives any subcontract exceeding \$100,000 under the Federal contract.

(4) All subcontractor disclosure forms (but not certifications) shall be forwarded from tier to tier until received by the prime Contractor. The prime Contractor shall submit all disclosures to the Contracting Officer at the end of the calendar quarter in which the disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding Contractor.

(d) Agreement. The Contractor agrees not to make any payment prohibited by this clause.

(e) Penalties.

(1) Any person who makes an expenditure prohibited under paragraph (a) of this clause or who fails to file or amend the disclosure form to be filed or amended by paragraph (b) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.

(2) Contractors may rely without liability on the representation made by their subcontractors in the certification and disclosure form.

(f) Cost allowability. Nothing in this clause makes allowable or reasonable any costs which would otherwise be unallowable or unreasonable. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any other provision.

(End of clause)

52.204-4 PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER (AUG 2000)

(a) Definitions. As used in this clause--

Postconsumer material means a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. Postconsumer material is a part of the broader category of "recovered material." For paper and paper products, postconsumer material means "postconsumer fiber" defined by the U.S. Environmental Protection Agency (EPA) as--

(1) Paper, paperboard, and fibrous materials from retail stores, office buildings, homes, and so forth, after they have passed through their end-usage as a consumer item, including: used corrugated boxes; old newspapers; old magazines; mixed waste paper; tabulating cards; and used cordage; or

(2) All paper, paperboard, and fibrous materials that enter and are collected from municipal solid waste; but not

(3) Fiber derived from printers' over-runs, converters' scrap, and over-issue publications.

Printed or copied double-sided means printing or reproducing a document so that information is on both sides of a sheet of paper.

Recovered material, for paper and paper products, is defined by EPA in its Comprehensive Procurement Guideline as "recovered fiber" and means the following materials:

(1) Postconsumer fiber; and

(2) Manufacturing wastes such as--

(i) Dry paper and paperboard waste generated after completion of the papermaking process (that is, those manufacturing operations up to and including the cutting and trimming of the paper machine reel into smaller rolls or rough sheets) including: envelope cuttings, bindery trimmings, and other paper and paperboard waste resulting from printing, cutting, forming, and other converting operations; bag, box, and carton manufacturing wastes; and butt rolls, mill wrappers, and rejected unused stock; and

(ii) Repulped finished paper and paperboard from obsolete inventories of paper and paperboard manufacturers, merchants, wholesalers, dealers, printers, converters, or others.



(b) In accordance with Section 101 of Executive Order 13101 of September 14, 1998, Greening the Government through Waste Prevention, Recycling, and Federal Acquisition, the Contractor is encouraged to submit paper documents, such as offers, letters, or reports, that are printed or copied double-sided on recycled paper that meet minimum content standards specified in Section 505 of Executive Order 13101, when not using electronic commerce methods to submit information or data to the Government.

(c) If the Contractor cannot purchase high-speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, file folders, white wove envelopes, writing and office paper, book paper, cotton fiber paper, and cover stock meeting the 30 percent postconsumer material standard for use in submitting paper documents to the Government, it should use paper containing no less than 20 percent postconsumer material. This lesser standard should be used only when paper meeting the 30 percent postconsumer material standard is not obtainable at a reasonable price or does not meet reasonable performance standards.

(End of clause)

#### 52.209-6 PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (JUL 1995)

(a) The Government suspends or debar Contractors to protect the Government's interests. The Contractor shall not enter into any subcontract in excess of the \$25,000 with a Contractor that is debarred, suspended, or proposed for debarment unless there is a compelling reason to do so.

(b) The Contractor shall require each proposed first-tier subcontractor, whose subcontract will exceed \$25,000, to disclose to the Contractor, in writing, whether as of the time of award of the subcontract, the subcontractor, or its principles, is or is not debarred, suspended, or proposed for debarment by the Federal Government.

(c) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is debarred, suspended, or proposed for debarment (see FAR 9.404 for information on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs). The notice must include the following:

(1) The name of the subcontractor.

(2) The Contractor's knowledge of the reasons for the subcontractor being on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.

(3) The compelling reason(s) for doing business with the subcontractor notwithstanding its inclusion on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.

(4) The systems and procedures the Contractor has established to ensure that it is fully protecting the Government's interests when dealing with such subcontractor in view of the specific basis for the party's debarment, suspension, or proposed debarment.

(End of clause)

#### 52.215-2 AUDIT AND RECORDS--NEGOTIATION (JUN 1999)

(a) As used in this clause, "records" includes books, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form.

(b) Examination of costs. If this is a cost-reimbursement, incentive, time-and-materials, labor-hour, or price redeterminable contract, or any combination of these, the Contractor shall maintain and the Contracting Officer, or an authorized representative of the Contracting Officer, shall have the right to examine and audit all records and

other evidence sufficient to reflect properly all costs claimed to have been incurred or anticipated to be incurred directly or indirectly in performance of this contract. This right of examination shall include inspection at all reasonable times of the Contractor's plants, or parts of them, engaged in performing the contract.

(c) Cost or pricing data. If the Contractor has been required to submit cost or pricing data in connection with any pricing action relating to this contract, the Contracting Officer, or an authorized representative of the Contracting Officer, in order to evaluate the accuracy, completeness, and currency of the cost or pricing data, shall have the right to examine and audit all of the Contractor's records, including computations and projections, related to--

- (1) The proposal for the contract, subcontract, or modification;
- (2) The discussions conducted on the proposal(s), including those related to negotiating;
- (3) Pricing of the contract, subcontract, or modification; or
- (4) Performance of the contract, subcontract or modification.

(d) Comptroller General--(1) The Comptroller General of the United States, or an authorized representative, shall have access to and the right to examine any of the Contractor's directly pertinent records involving transactions related to this contract or a subcontract hereunder.

(2) This paragraph may not be construed to require the Contractor or subcontractor to create or maintain any record that the Contractor or subcontractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e) Reports. If the Contractor is required to furnish cost, funding, or performance reports, the Contracting Officer or an authorized representative of the Contracting Officer shall have the right to examine and audit the supporting records and materials, for the purpose of evaluating (1) the effectiveness of the Contractor's policies and procedures to produce data compatible with the objectives of these reports and (2) the data reported.

(f) Availability. The Contractor shall make available at its office at all reasonable times the records, materials, and other evidence described in paragraphs (a), (b), (c), (d), and (e) of this clause, for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in Subpart 4.7, Contractor Records Retention, of the Federal Acquisition Regulation (FAR), or for any longer period required by statute or by other clauses of this contract. In addition--

- (1) If this contract is completely or partially terminated, the Contractor shall make available the records relating to the work terminated until 3 years after any resulting final termination settlement; and
- (2) The Contractor shall make available records relating to appeals under the Disputes clause or to litigation or the settlement of claims arising under or relating to this contract until such appeals, litigation, or claims are finally resolved.

(g) The Contractor shall insert a clause containing all the terms of this clause, including this paragraph (g), in all subcontracts under this contract that exceed the simplified acquisition threshold, and--

- (1) That are cost-reimbursement, incentive, time-and-materials, labor-hour, or price-redeterminable type or any combination of these;
- (2) For which cost or pricing data are required; or
- (3) That require the subcontractor to furnish reports as discussed in paragraph (e) of this clause.

The clause may be altered only as necessary to identify properly the contracting parties and the Contracting Officer under the Government prime contract.

(End of clause)

**52.215-21 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA--MODIFICATIONS (OCT 1997)**

(a) Exceptions from cost or pricing data. (1) In lieu of submitting cost or pricing data for modifications under this contract, for price adjustments expected to exceed the threshold set forth at FAR 15.403-4 on the date of the agreement on price or the date of the award, whichever is later, the Contractor may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable--

(i) Identification of the law or regulation establishing the price offered. If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) Information on modifications of contracts or subcontracts for commercial items. (A) If--

(1) The original contract or subcontract was granted an exception from cost or pricing data requirements because the price agreed upon was based on adequate price competition or prices set by law or regulation, or was a contract or subcontract for the acquisition of a commercial item; and

(2) The modification (to the contract or subcontract) is not exempted based on one of these exceptions, then the Contractor may provide information to establish that the modification would not change the contract or subcontract from a contract or subcontract for the acquisition of a commercial item to a contract or subcontract for the acquisition of an item other than a commercial item.

(B) For a commercial item exception, the Contractor shall provide, at a minimum, information on prices at which the same item or similar items have previously been sold that is adequate for evaluating the reasonableness of the price of the modification. Such information may include--

(1) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities.

(2) For market-priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market.

(3) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The Contractor grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this clause, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the Contractor's determination of the prices to be offered in the catalog or marketplace.

(b) Requirements for cost or pricing data. If the Contractor is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The Contractor shall submit cost or pricing data and supporting attachments in accordance with Table 15-2 of

FAR 15.408.

As soon as practicable after agreement on price, but before award (except for unpriced actions), the Contractor shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR 15.406-2.

#### 52.219-8 UTILIZATION OF SMALL BUSINESS CONCERNS (OCT 2000)

(a) It is the policy of the United States that small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns shall have the maximum practicable opportunity to participate in performing contracts let by any Federal agency, including contracts and subcontracts for subsystems, assemblies, components, and related services for major systems. It is further the policy of the United States that its prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns.

(b) The Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with efficient contract performance. The Contractor further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the awarding agency of the United States as may be necessary to determine the extent of the Contractor's compliance with this clause.

Definitions. As used in this contract--

HUBZone small business concern means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

Small business concern means a small business as defined pursuant to Section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto.

Small disadvantaged business concern means a small business concern that represents, as part of its offer that--

(1) It has received certification as a small disadvantaged business concern consistent with 13 CFR part 124, subpart B;

(2) No material change in disadvantaged ownership and control has occurred since its certification;

(3) Where the concern is owned by one or more individuals, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and

(4) It is identified, on the date of its representation, as a certified small disadvantaged business in the database maintained by the Small Business Administration (PRO-Net).

Veteran-owned small business concern means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

Women-owned small business concern means a small business concern--

(1) That is at least 51 percent owned by one or more women, or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as a small business concern, a veteran-owned small business concern, a service-disabled veteran-owned small business concern, a HUBZone small business concern, a small disadvantaged business concern, or a women-owned small business concern.

(End of clause)

#### 52.222-1 NOTICE TO THE GOVERNMENT OF LABOR DISPUTES (FEB 1997)

If the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this contract, the Contractor shall immediately give notice, including all relevant information, to the Contracting Officer.

#### 52.222-3 CONVICT LABOR (AUG 1996)

The Contractor agrees not to employ in the performance of this contract any person undergoing a sentence of imprisonment which has been imposed by any court of a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or the Trust Territory of the Pacific Islands. This limitation, however, shall not prohibit the employment by the Contractor in the performance of this contract of persons on parole or probation to work at paid employment during the term of their sentence or persons who have been pardoned or who have served their terms. Nor shall it prohibit the employment by the Contractor in the performance of this contract of persons confined for violation of the laws of any of the States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or the Trust Territory of the Pacific Islands who are authorized to work at paid employment in the community under the laws of such jurisdiction, if--

(a)(1) The worker is paid or is in an approved work training program on a voluntary basis;

(2) Representatives of local union central bodies or similar labor union organizations have been consulted;

(3) Such paid employment will not result in the displacement of employed workers, or be applied in skills, crafts, or

trades in which there is a surplus of available gainful labor in the locality, or impair existing contracts for services; and

(4) The rates of pay and other conditions of employment will not be less than those paid or provided for work of a similar nature in the locality in which the work is being performed; and

(b) The Attorney General of the United States has certified that the work-release laws or regulations of the jurisdiction involved are in conformity with the requirements of Executive Order 11755, as amended by Executive Orders 12608 and 12943.

(End of clause)

**52.222-4 CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION. (SEP 2000)**

(a) Overtime requirements. No Contractor or subcontractor employing laborers or mechanics (see Federal Acquisition Regulation 22.300) shall require or permit them to work over 40 hours in any workweek unless they are paid at least 1 and 1/2 times the basic rate of pay for each hour worked over 40 hours.

(b) Violation; liability for unpaid wages; liquidated damages. The responsible Contractor and subcontractor are liable for unpaid wages if they violate the terms in paragraph (a) of this clause. In addition, the Contractor and subcontractor are liable for liquidated damages payable to the Government. The Contracting Officer will assess liquidated damages at the rate of \$10 per affected employee for each calendar day on which the employer required or permitted the employee to work in excess of the standard workweek of 40 hours without paying overtime wages required by the Contract Work Hours and Safety Standards Act.

(c) Withholding for unpaid wages and liquidated damages. The Contracting Officer will withhold from payments due under the contract sufficient funds required to satisfy any Contractor or subcontractor liabilities for unpaid wages and liquidated damages. If amounts withheld under the contract are insufficient to satisfy Contractor or subcontractor liabilities, the Contracting Officer will withhold payments from other Federal or Federally assisted contracts held by the same Contractor that are subject to the Contract Work Hours and Safety Standards Act.

(d) Payrolls and basic records.

(1) The Contractor and its subcontractors shall maintain payrolls and basic payroll records for all laborers and mechanics working on the contract during the contract and shall make them available to the Government until 3 years after contract completion. The records shall contain the name and address of each employee, social security number, labor classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. The records need not duplicate those required for construction work by Department of Labor regulations at 29 CFR 5.5(a)(3) implementing the Davis-Bacon Act.

(2) The Contractor and its subcontractors shall allow authorized representatives of the Contracting Officer or the Department of Labor to inspect, copy, or transcribe records maintained under paragraph (d)(1) of this clause. The Contractor or subcontractor also shall allow authorized representatives of the Contracting Officer or Department of Labor to interview employees in the workplace during working hours.

(e) Subcontracts. The Contractor shall insert the provisions set forth in paragraphs (a) through (d) of this clause in subcontracts exceeding \$100,000 and require subcontractors to include these provisions in any lower tier subcontracts. The Contractor shall be responsible for compliance by any subcontractor or lower-tier subcontractor with the provisions set forth in paragraphs (a) through (d) of this clause.

(End of clause)

**52.222-21 PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)**

(a) Segregated facilities, as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(b) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

(End of clause)

#### 52.222-26 EQUAL OPPORTUNITY (FEB 1999)

(a) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of \$10,000, the Contractor shall comply with subparagraphs (b)(1) through (11) of this clause. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(b) During performing this contract, the Contractor agrees as follows:

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. However, it shall not be a violation of this clause for the Contractor to extend a publicly announced preference in employment to Indians living on or near an Indian reservation, in connection with employment opportunities on or near an Indian reservation, as permitted by 41 CFR 60-1.5.

(2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include, but not be limited to, (i) employment, (ii) upgrading, (iii) demotion, (iv) transfer, (v) recruitment or recruitment advertising, (vi) layoff or termination, (vii) rates of pay or other forms of compensation, and (viii) selection for training, including apprenticeship.

(3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.

(4) The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(5) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(7) The Contractor shall furnish to the contracting agency all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. The Contractor shall also file Standard Form 100 (EEO-1), or any successor form, as prescribed in 41 CFR part 60-1. Unless the Contractor has filed within

the 12 months preceding the date of contract award, the Contractor shall, within 30 days after contract award, apply to either the regional Office of Federal Contract Compliance Programs (OFCCP) or the local office of the Equal Employment Opportunity Commission for the necessary forms.

(8) The Contractor shall permit access to its premises, during normal business hours, by the contracting agency or the OFCCP for the purpose of conducting on-site compliance evaluations and complaint investigations. The Contractor shall permit the Government to inspect and copy any books, accounts, records (including computerized records), and other material that may be relevant to the matter under investigation and pertinent to compliance with Executive Order 11246, as amended, and rules and regulations that implement the Executive Order.

(9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended; in the rules, regulations, and orders of the Secretary of Labor; or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of subparagraphs (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the contracting officer may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(c) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

#### 52.222-35 AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA (APR 1998)

(a) ) Definitions. As used in this clause--

All employment openings includes all positions except executive and top management, those positions that will be filled from within the contractor's organization, and positions lasting 3 days or less. This term includes full-time employment, temporary employment of more than 3 days' duration, and part-time employment.

Appropriate office of the State employment service system means the local office of the Federal-State national system of public employment offices with assigned responsibility to serve the area where the employment opening is to be filled, including the District of Columbia, Guam, the Commonwealth of Puerto Rico, and the Virgin Islands.

Positions that will be filled from within the Contractor's organization means employment openings for which no consideration will be given to persons outside the Contractor's organization (including any affiliates, subsidiaries, and parent companies) and includes any openings that the Contractor proposes to fill from regularly established "recall" lists. The exception does not apply to a particular opening once an employer decides to consider applicants outside of its organization.

Veteran of the Vietnam era means a person who--

(1) Served on active duty for a period of more than 180 days, any part of which occurred between August 5, 1964, and May 7, 1975, and was discharged or released therefrom with other than a dishonorable discharge; or



(2) Was discharged or released from active duty for a service-connected disability if any part of such active duty was performed between August 5, 1964, and May 7, 1975.

(b) General. (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against the individual because the individual is a disabled veteran or a veteran of the Vietnam era. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified disabled veterans and veterans of the Vietnam era without discrimination based upon their disability or veterans' status in all employment practices such as--

(i) Employment;

(ii) Upgrading;

(iii) Demotion or transfer;

(iv) Recruitment;

(v) Advertising;

(vi) Layoff or termination;

(vii) Rates of pay or other forms of compensation; and

(viii) Selection for training, including apprenticeship.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Vietnam Era Veterans' Readjustment Assistance Act of 1972 (the Act), as amended.

(c) Listing openings. (1) The Contractor agrees to list all employment openings existing at contract award or occurring during contract performance, at an appropriate office of the State employment service system in the locality where the opening occurs. These openings include those occurring at any Contractor facility, including one not connected with performing this contract. An independent corporate affiliate is exempt from this requirement.

(2) State and local government agencies holding Federal contracts of \$10,000 or more shall also list all their employment openings with the appropriate office of the State employment service.

(3) The listing of employment openings with the State employment service system is required at least concurrently with using any other recruitment source or effort and involves the obligations of placing a bona fide job order, including accepting referrals of veterans and nonveterans. This listing does not require hiring any particular job applicant or hiring from any particular group of job applicants and is not intended to relieve the Contractor from any requirements of Executive orders or regulations concerning nondiscrimination in employment.

(4) Whenever the Contractor becomes contractually bound to the listing terms of this clause, it shall advise the State employment service system, in each State where it has establishments, of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these terms and has so advised the State system, it need not advise the State system of subsequent contracts. The Contractor may advise the State system when it is no longer bound by this contract clause.

(d) Applicability. This clause does not apply to the listing of employment openings that occur and are filled outside the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, and the Virgin Islands.

(e) Postings. (1) The Contractor agrees to post employment notices stating (i) the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era, and (ii) the rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. They shall be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance Programs, Department of Labor (Deputy Assistant Secretary), and provided by or through the Contracting Officer.

(3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of the Act, and is committed to take affirmative action to employ, and advance in employment, qualified disabled veterans and veterans of the Vietnam Era.

(f) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(g) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Deputy Assistant Secretary to enforce the terms, including action for noncompliance.

(End of clause)

#### 52.222-36 AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES (JUN 1998)

(a) General. (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against any employee or applicant because of physical or mental disability. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified individuals with disabilities without discrimination based upon their physical or mental disability in all employment practices such as--

(i) Recruitment, advertising, and job application procedures;

(ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff, and rehiring;

(iii) Rates of pay or any other form of compensation and changes in compensation;

(iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;

(v) Leaves of absence, sick leave, or any other leave;

(vi) Fringe benefits available by virtue of employment, whether or not administered by the Contractor;

(vii) Selection and financial support for training, including apprenticeships, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;

(viii) Activities sponsored by the Contractor, including social or recreational programs; and

(ix) Any other term, condition, or privilege of employment.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Rehabilitation Act of 1973 (29 U.S.C. 793) (the Act), as amended.

(b) Postings. (1) The Contractor agrees to post employment notices stating--

(i) The Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified individuals with disabilities; and

(ii) The rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. The Contractor shall ensure that applicants and employees with disabilities are informed of the contents of the notice (e.g., the Contractor may have the notice read to a visually disabled individual, or may lower the posted notice so that it might be read by a person in a wheelchair). The notices shall be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance of the U.S. Department of Labor (Deputy Assistant Secretary) and shall be provided by or through the Contracting Officer.

(3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Section 503 of the Act and is committed to take affirmative action to employ, and advance in employment, qualified individuals with physical or mental disabilities.

(c) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(d) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order in excess of \$10,000 unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Deputy Assistant Secretary to enforce the terms, including action for noncompliance.

(End of clause)

#### 52.222-37 EMPLOYMENT REPORTS ON DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA (JAN 1999)

(a) Unless the Contractor is a State or local government agency, the Contractor shall report at least annually, as required by the Secretary of Labor, on--

(1) The number of disabled veterans and the number of veterans of the Vietnam era in the workforce of the contractor by job category and hiring location; and

(2) The total number of new employees hired during the period covered by the report, and of that total, the number of disabled veterans, and the number of veterans of the Vietnam era.

(b) The above items shall be reported by completing the form entitled "Federal Contractor Veterans' Employment Report VETS-100."

(c) Reports shall be submitted no later than September 30 of each year beginning September 30, 1988.

(d) The employment activity report required by paragraph (a)(2) of this clause shall reflect total hires during the most recent 12-month period as of the ending date selected for the employment profile report required by paragraph (a)(1) of this clause. Contractors may select an ending date: (1) As of the end of any pay period during the period January through March 1st of the year the report is due, or (2) as of December 31, if the contractor has previous written approval from the Equal Employment Opportunity Commission to do so for purposes of submitting the Employer Information Report EEO-1 (Standard Form 100).

(e) The count of veterans reported according to paragraph (a) of this clause shall be based on voluntary disclosure. Each Contractor subject to the reporting requirements at 38 U.S.C. 4212 shall invite all disabled veterans and veterans of the Vietnam era who wish to benefit under the affirmative action program at 38 U.S.C. 4212 to identify themselves to the Contractor. The invitation shall state that the information is voluntarily provided; that the information will be kept confidential; that disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment; and that the information will be used only in accordance with the regulations promulgated under 38 U.S.C. 4212.

(f) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary.

(End of clause)

#### 52.222-41 SERVICE CONTRACT ACT OF 1965, AS AMENDED (MAY 1989)

(a) Definitions. "Act," as used in this clause, means the Service Contract Act of 1965, as amended (41 U.S.C. 351, et seq.).

"Contractor," as used in this clause or in any subcontract, shall be deemed to refer to the subcontractor, except in the term "Government Prime Contractor."

"Service employee," as used in this clause, means any person engaged in the performance of this contract other than any person employed in a bona fide executive, administrative, or professional capacity, as these terms are defined in Part 541 of Title 29, Code of Federal Regulations, as revised. It includes all such persons regardless of any contractual relationship that may be alleged to exist between a Contractor or subcontractor and such persons.

(b) Applicability. This contract is subject to the following provisions and to all other applicable provisions of the Act and regulations of the Secretary of Labor (29 CFR Part 4). This clause does not apply to contracts or subcontracts administratively exempted by the Secretary of Labor or exempted by 41 U.S.C. 356, as interpreted in Subpart C of 29 CFR Part 4.

(c) Compensation. (1) Each service employee employed in the performance of this contract by the Contractor or any subcontractor shall be paid not less than the minimum monetary wages and shall be furnished fringe benefits in accordance with the wages and fringe benefits determined by the Secretary of Labor, or authorized representative, as specified in any wage determination attached to this contract.

(2)(i) If a wage determination is attached to this contract, the Contractor shall classify any class of service employee which is not listed therein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination) so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed class of employees shall be paid the monetary wages and furnished the fringe benefits as are determined pursuant to the procedures in this paragraph (c).

(ii) This conforming procedure shall be initiated by the Contractor prior to the performance of contract work by the unlisted class of employee. The Contractor shall submit Standard Form (SF) 1444, Request For Authorization of Additional Classification and Rate, to the Contracting Officer no later than 30 days after the unlisted class of employee performs any contract work. The Contracting Officer shall review the proposed classification and rate and promptly submit the completed SF 1444 (which must include information regarding the agreement or disagreement of the employees' authorized representatives or the employees themselves together with the agency recommendation), and all pertinent information to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor. The Wage and Hour Division will approve, modify, or disapprove the action or render a final determination in the event of disagreement within 30 days of receipt or will notify the Contracting Officer within 30 days of receipt that additional time is necessary.

(iii) The final determination of the conformance action by the Wage and Hour Division shall be transmitted to the Contracting Officer who shall promptly notify the Contractor of the action taken. Each affected employee shall be furnished by the Contractor with a written copy of such determination or it shall be posted as a part of the wage determination.

(iv)(A) The process of establishing wage and fringe benefit rates that bear a reasonable relationship to those listed in a wage determination cannot be reduced to any single formula. The approach used may vary from wage determination to wage determination depending on the circumstances. Standard wage and salary administration

practices which rank various job classifications by pay grade pursuant to point schemes or other job factors may, for example, be relied upon. Guidance may also be obtained from the way different jobs are rated under Federal pay systems (Federal Wage Board Pay System and the General Schedule) or from other wage determinations issued in the same locality. Basic to the establishment of any conformable wage rate(s) is the concept that a pay relationship should be maintained between job classifications based on the skill required and the duties performed.

(B) In the case of a contract modification, an exercise of an option, or extension of an existing contract, or in any other case where a Contractor succeeds a contract under which the classification in question was previously conformed pursuant to paragraph (c) of this clause, a new conformed wage rate and fringe benefits may be assigned to the conformed classification by indexing (i.e., adjusting) the previous conformed rate and fringe benefits by an amount equal to the average (mean) percentage increase (or decrease, where appropriate) between the wages and fringe benefits specified for all classifications to be used on the contract which are listed in the current wage determination, and those specified for the corresponding classifications in the previously applicable wage determination. Where conforming actions are accomplished in accordance with this paragraph prior to the performance of contract work by the unlisted class of employees, the Contractor shall advise the Contracting Officer of the action taken but the other procedures in subdivision (c)(2)(ii) of this clause need not be followed.

(C) No employee engaged in performing work on this contract shall in any event be paid less than the currently applicable minimum wage specified under section 6(a)(1) of the Fair Labor Standards Act of 1938, as amended.

(v) The wage rate and fringe benefits finally determined under this subparagraph (c)(2) of this clause shall be paid to all employees performing in the classification from the first day on which contract work is performed by them in the classification. Failure to pay the unlisted employees the compensation agreed upon by the interested parties and/or finally determined by the Wage and Hour Division retroactive to the date such class of employees commenced contract work shall be a violation of the Act and this contract.

(vi) Upon discovery of failure to comply with subparagraph (c)(2) of this clause, the Wage and Hour Division shall make a final determination of conformed classification, wage rate, and/or fringe benefits which shall be retroactive to the date such class or classes of employees commenced contract work.

(3) Adjustment of Compensation. If the term of this contract is more than 1 year, the minimum monetary wages and fringe benefits required to be paid or furnished thereunder to service employees under this contract shall be subject to adjustment after 1 year and not less often than once every 2 years, under wage determinations issued by the Wage and Hour Division.

(d) Obligation to Furnish Fringe Benefits. The Contractor or subcontractor may discharge the obligation to furnish fringe benefits specified in the attachment or determined under subparagraph (c)(2) of this clause by furnishing equivalent combinations of bona fide fringe benefits, or by making equivalent or differential cash payments, only in accordance with Subpart D of 29 CFR Part 4.

(e) Minimum Wage. In the absence of a minimum wage attachment for this contract, neither the Contractor nor any subcontractor under this contract shall pay any person performing work under this contract (regardless of whether the person is a service employee) less than the minimum wage specified by section 6(a)(1) of the Fair Labor Standards Act of 1938. Nothing in this clause shall relieve the Contractor or any subcontractor of any other obligation under law or contract for payment of a higher wage to any employee.

(f) Successor Contracts. If this contract succeeds a contract subject to the Act under which substantially the same services were furnished in the same locality and service employees were paid wages and fringe benefits provided for in a collective bargaining agreement, in the absence of the minimum wage attachment for this contract setting forth such collectively bargained wage rates and fringe benefits, neither the Contractor nor any subcontractor under this contract shall pay any service employee performing any of the contract work (regardless of whether or not such employee was employed under the predecessor contract), less than the wages and fringe benefits provided for in such collective bargaining agreement, to which such employee would have been entitled if employed under the predecessor contract, including accrued wages and fringe benefits and any prospective increases in wages and fringe benefits provided for under such agreement. No Contractor or subcontractor under this contract may be relieved of

the foregoing obligation unless the limitations of 29 CFR 4.1b(b) apply or unless the Secretary of Labor or the Secretary's authorized representative finds, after a hearing as provided in 29 CFR 4.10 that the wages and/or fringe benefits provided for in such agreement are substantially at variance with those which prevail for services of a character similar in the locality, or determines, as provided in 29 CFR 4.11, that the collective bargaining agreement applicable to service employees employed under the predecessor contract was not entered into as a result of arm's length negotiations. Where it is found in accordance with the review procedures provided in 29 CFR 4.10 and/or 4.11 and Parts 6 and 8 that some or all of the wages and/or fringe benefits contained in a predecessor Contractor's collective bargaining agreement are substantially at variance with those which prevail for services of a character similar in the locality, and/or that the collective bargaining agreement applicable to service employees employed under the predecessor contract was not entered into as a result of arm's length negotiations, the Department will issue a new or revised wage determination setting forth the applicable wage rates and fringe benefits. Such determination shall be made part of the contract or subcontract, in accordance with the decision of the Administrator, the Administrative Law Judge, or the Board of Service Contract Appeals, as the case may be, irrespective of whether such issuance occurs prior to or after the award of a contract or subcontract (53 Comp. Gen. 401 (1973)). In the case of a wage determination issued solely as a result of a finding of substantial variance, such determination shall be effective as of the date of the final administrative decision.

(g) Notification to Employees. The Contractor and any subcontractor under this contract shall notify each service employee commencing work on this contract of the minimum monetary wage and any fringe benefits required to be paid pursuant to this contract, or shall post the wage determination attached to this contract. The poster provided by the Department of Labor (Publication WH 1313) shall be posted in a prominent and accessible place at the worksite. Failure to comply with this requirement is a violation of section 2(a)(4) of the Act and of this contract.

(h) Safe and Sanitary Working Conditions. The Contractor or subcontractor shall not permit any part of the services called for by this contract to be performed in buildings or surroundings or under working conditions provided by or under the control or supervision of the Contractor or subcontractor which are unsanitary, hazardous, or dangerous to the health or safety of the service employees. The Contractor or subcontractor shall comply with the safety and health standards applied under 29 CFR Part 1925.

(i) Records. (1) The Contractor and each subcontractor performing work subject to the Act shall make and maintain for 3 years from the completion of the work, and make them available for inspection and transcription by authorized representatives of the Wage and Hour Division, Employment Standards Administration, a record of the following:

(i) For each employee subject to the Act--

(A) Name and address and social security number;

(B) Correct work classification or classifications, rate or rates of monetary wages paid and fringe benefits provided, rate or rates of payments in lieu of fringe benefits, and total daily and weekly compensation;

(C) Daily and weekly hours worked by each employee; and

(D) Any deductions, rebates, or refunds from the total daily or weekly compensation of each employee.

(ii) For those classes of service employees not included in any wage determination attached to this contract, wage rates or fringe benefits determined by the interested parties or by the Administrator or authorized representative under the terms of paragraph (c) of this clause. A copy of the report required by subdivision (c)(2)(ii) of this clause will fulfill this requirement.

(iii) Any list of the predecessor Contractor's employees which had been furnished to the Contractor as prescribed by paragraph (n) of this clause.

(2) The Contractor shall also make available a copy of this contract for inspection or transcription by authorized representatives of the Wage and Hour Division.

(3) Failure to make and maintain or to make available these records for inspection and transcription shall be a violation of the regulations and this contract, and in the case of failure to produce these records, the Contracting Officer, upon direction of the Department of Labor and notification to the Contractor, shall take action to cause suspension of any further payment or advance of funds until the violation ceases.

(4) The Contractor shall permit authorized representatives of the Wage and Hour Division to conduct interviews with employees at the worksite during normal working hours.

(j) Pay Periods. The Contractor shall unconditionally pay to each employee subject to the Act all wages due free and clear and without subsequent deduction (except as otherwise provided by law or regulations, 29 CFR Part 4), rebate, or kickback on any account. These payments shall be made no later than one pay period following the end of the regular pay period in which the wages were earned or accrued. A pay period under this Act may not be of any duration longer than semi-monthly.

(k) Withholding of Payments and Termination of Contract. The Contracting Officer shall withhold or cause to be withheld from the Government Prime Contractor under this or any other Government contract with the Prime Contractor such sums as an appropriate official of the Department of Labor requests or such sums as the Contracting Officer decides may be necessary to pay underpaid employees employed by the Contractor or subcontractor. In the event of failure to pay any employees subject to the Act all or part of the wages or fringe benefits due under the Act, the Contracting Officer may, after authorization or by direction of the Department of Labor and written notification to the Contractor, take action to cause suspension of any further payment or advance of funds until such violations have ceased. Additionally, any failure to comply with the requirements of this clause may be grounds for termination of the right to proceed with the contract work. In such event, the Government may enter into other contracts or arrangements for completion of the work, charging the Contractor in default with any additional cost.

(l) Subcontracts. The Contractor agrees to insert this clause in all subcontracts subject to the Act.

(m) Collective Bargaining Agreements Applicable to Service Employees. If wages to be paid or fringe benefits to be furnished any service employees employed by the Government Prime Contractor or any subcontractor under the contract are provided for in a collective bargaining agreement which is or will be effective during any period in which the contract is being performed, the Government Prime Contractor shall report such fact to the Contracting Officer, together with full information as to the application and accrual of such wages and fringe benefits, including any prospective increases, to service employees engaged in work on the contract, and a copy of the collective bargaining agreement. Such report shall be made upon commencing performance of the contract, in the case of collective bargaining agreements effective at such time, and in the case of such agreements or provisions or amendments thereof effective at a later time during the period of contract performance such agreements shall be reported promptly after negotiation thereof.

(n) Seniority List. Not less than 10 days prior to completion of any contract being performed at a Federal facility where service employees may be retained in the performance of the succeeding contract and subject to a wage determination which contains vacation or other benefit provisions based upon length of service with a Contractor (predecessor) or successor (29 CFR 4.173), the incumbent Prime Contractor shall furnish the Contracting Officer a certified list of the names of all service employees on the Contractor's or subcontractor's payroll during the last month of contract performance. Such list shall also contain anniversary dates of employment on the contract either with the current or predecessor Contractors of each such service employee. The Contracting Officer shall turn over such list to the successor Contractor at the commencement of the succeeding contract.

(o) Rulings and Interpretations. Rulings and interpretations of the Act are contained in Regulations, 29 CFR Part 4.

(p) Contractor's Certification. (1) By entering into this contract, the Contractor (and officials thereof) certifies that neither it (nor he or she) nor any person or firm who has a substantial interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of the sanctions imposed under section 5 of the Act.

(2) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract under section 5 of the Act.

(3) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(q) Variations, Tolerances, and Exemptions Involving Employment. Notwithstanding any of the provisions in paragraphs (b) through (o) of this clause, the following employees may be employed in accordance with the following variations, tolerances, and exemptions, which the Secretary of Labor, pursuant to section 4(b) of the Act prior to its amendment by Pub. L. 92-473, found to be necessary and proper in the public interest or to avoid serious impairment of the conduct of Government business:

(1) Apprentices, student-learners, and workers whose earning capacity is impaired by age, physical or mental deficiency, or injury may be employed at wages lower than the minimum wages otherwise required by section 2(a)(1) or 2(b)(1) of the Act without diminishing any fringe benefits or cash payments in lieu thereof required under section 2(a)(2) of the Act, in accordance with the conditions and procedures prescribed for the employment of apprentices, student-learners, handicapped persons, and handicapped clients of sheltered workshops under section 14 of the Fair Labor Standards Act of 1938, in the regulations issued by the Administrator (29 CFR Parts 520, 521, 524, and 525).

(2) The Administrator will issue certificates under the Act for the employment of apprentices, student-learners, handicapped persons, or handicapped clients of sheltered workshops not subject to the Fair Labor Standards Act of 1938, or subject to different minimum rates of pay under the two acts, authorizing appropriate rates of minimum wages (but without changing requirements concerning fringe benefits or supplementary cash payments in lieu thereof), applying procedures prescribed by the applicable regulations issued under the Fair Labor Standards Act of 1938 (29 CFR Parts 520, 521, 524, and 525).

(3) The Administrator will also withdraw, annul, or cancel such certificates in accordance with the regulations in 29 CFR Parts 525 and 528.

(r) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed and individually registered in a bona fide apprenticeship program registered with a State Apprenticeship Agency which is recognized by the U.S. Department of Labor, or if no such recognized agency exists in a State, under a program registered with the Bureau of Apprenticeship and Training, Employment and Training Administration, U.S. Department of Labor. Any employee who is not registered as an apprentice in an approved program shall be paid the wage rate and fringe benefits contained in the applicable wage determination for the journeyman classification of work actually performed. The wage rates paid apprentices shall not be less than the wage rate for their level of progress set forth in the registered program, expressed as the appropriate percentage of the journeyman's rate contained in the applicable wage determination. The allowable ratio of apprentices to journeymen employed on the contract work in any craft classification shall not be greater than the ratio permitted to the Contractor as to his entire work force under the registered program.

(s) Tips. An employee engaged in an occupation in which the employee customarily and regularly receives more than \$30 a month in tips may have the amount of these tips credited by the employer against the minimum wage required by section 2(a)(1) or section 2(b)(1) of the Act, in accordance with section 3(m) of the Fair Labor Standards Act and Regulations, 29 CFR Part 531. However, the amount of credit shall not exceed \$1.34 per hour beginning January 1, 1981. To use this provision--

(1) The employer must inform tipped employees about this tip credit allowance before the credit is utilized;

(2) The employees must be allowed to retain all tips (individually or through a pooling arrangement and regardless of whether the employer elects to take a credit for tips received);

(3) The employer must be able to show by records that the employee receives at least the applicable Service Contract Act minimum wage through the combination of direct wages and tip credit; and

(4) The use of such tip credit must have been permitted under any predecessor collective bargaining agreement applicable by virtue of section 4(c) of the Act.



Disputes Concerning Labor Standards. The U.S. Department of Labor has set forth in 29 CFR Parts 4, 6, and 8 procedures for resolving disputes concerning labor standards requirements. Such disputes shall be resolved in accordance with those procedures and not the Disputes clause of this contract. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(End of clause)

52.222-44 FAIR LABOR STANDARDS ACT AND SERVICE CONTRACT ACT--PRICE ADJUSTMENT (MAY 1989)

(a) This clause applies to both contracts subject to area prevailing wage determinations and contracts subject to Contractor collective bargaining agreements.

(b) The Contractor warrants that the prices in this contract do not include any allowance for any contingency to cover increased costs for which adjustment is provided under this clause.

(c) The contract price or contract unit price labor rates will be adjusted to reflect increases or decreases by the Contractor in wages and fringe benefits to the extent that these increases or decreases are made to comply with--

(1) An increased or decreased wage determination applied to this contract by operation of law; or

(2) An amendment to the Fair Labor Standards Act of 1938 that is enacted subsequent to award of this contract, affects the minimum wage, and becomes applicable to this contract under law.

(d) Any such adjustment will be limited to increases or decreases in wages and fringe benefits as described in paragraph (b) of this clause, and to the accompanying increases or decreases in social security and unemployment taxes and workers' compensation insurance; it shall not otherwise include any amount for general and administrative costs, overhead, or profit.

(e) The Contractor shall notify the Contracting Officer of any increase claimed under this clause within 30 days after the effective date of the wage change, unless this period is extended by the Contracting Officer in writing. The Contractor shall promptly notify the Contracting Officer of any decrease under this clause, but nothing in the clause shall preclude the Government from asserting a claim within the period permitted by law. The notice shall contain a statement of the amount claimed and any relevant supporting data that the Contracting Officer may reasonably require. Upon agreement of the parties, the contract price or contract unit price labor rates shall be modified in writing. The Contractor shall continue performance pending agreement on or determination of any such adjustment and its effective date.

(f) The Contracting Officer or an authorized representative shall, until the expiration of 3 years after final payment under the contract, have access to and the right to examine any directly pertinent books, documents, papers, and records of the Contractor.

(End of clause)

52.223-6 DRUG-FREE WORKPLACE (MAY 2001)

(a) Definitions. As used in this clause --

"Controlled substance" means a controlled substance in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11 - 1308.15.

"Conviction" means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to deter- mine violations of the Federal or State criminal drug

statutes.

"Criminal drug statute" means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession, or use of any controlled substance.

"Drug-free workplace" means the site(s) for the performance of work done by the Contractor in connection with a specific contract where employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

"Employee" means an employee of a Contractor directly engaged in the performance of work under a Government contract. "Directly engaged" is defined to include all direct cost employees and any other Contractor employee who has other than a minimal impact or involvement in contract performance.

"Individual" means an offeror/contractor that has no more than one employee including the offeror/contractor.

(b) The Contractor, if other than an individual, shall-- within 30 days after award (unless a longer period is agreed to in writing for contracts of 30 days or more performance duration), or as soon as possible for contracts of less than 30 days performance duration--

(1) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

(2) Establish an ongoing drug-free awareness program to inform such employees about--

(i) The dangers of drug abuse in the workplace;

(ii) The Contractor's policy of maintaining a drug-free workplace;

(iii) Any available drug counseling, rehabilitation, and employee assistance programs; and

(iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

(3) Provide all employees engaged in performance of the contract with a copy of the statement required by subparagraph (b)(1) of this clause;

(4) Notify such employees in writing in the statement required by subparagraph (b)(1) of this clause that, as a condition of continued employment on this contract, the employee will--

(i) Abide by the terms of the statement; and

(ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 days after such conviction.

(5) Notify the Contracting Officer in writing within 10 days after receiving notice under subdivision (b)(4)(ii) of this clause, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position title of the employee;

(6) Within 30 days after receiving notice under subdivision (b)(4)(ii) of this clause of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:

(i) Taking appropriate personnel action against such employee, up to and including termination; or

(ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved

for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency; and

(7) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraphs (b)(1) through (b)(6) of this clause.

(c) The Contractor, if an individual, agrees by award of the contract or acceptance of a purchase order, not to engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance while performing this contract.

(d) In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraph (b) or (c) of this clause may, pursuant to FAR 23.506, render the Contractor subject to suspension of contract payments, termination of the contract for default, and suspension or debarment.

(End of clause)

#### 52.223-14 TOXIC CHEMICAL RELEASE REPORTING (OCT 2000)

(a) Unless otherwise exempt, the Contractor, as owner or operator of a facility used in the performance of this contract, shall file by July 1 for the prior calendar year an annual Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023(a) and (g)), and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106). The Contractor shall file, for each facility subject to the Form R filing and reporting requirements, the annual Form R throughout the life of the contract.

(b) A Contractor owned or operated facility used in the performance of this contract is exempt from the requirement to file an annual Form R if--

(1) The facility does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

(2) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);

(3) The facility does not meet the reporting thresholds of toxic chemicals established under of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

(4) The facility does not fall within Standard Industrial Classification Code (SIC) major groups 20 through 39 or their corresponding North American Industry Classification System (NAICS) sectors 31 through 33; or

(5) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

(c) If the Contractor has certified to an exemption in accordance with one or more of the criteria in paragraph (b) of this clause, and after award of the contract circumstances change so that any of its owned or operated facilities used in the performance of this contract is no longer exempt--

(1) The Contractor shall notify the Contracting Officer; and

(2) The Contractor, as owner or operator of a facility used in the performance of this contract that is no longer exempt, shall (i) submit a Toxic Chemical Release Inventory Form (Form R) on or before July 1 for the prior calendar year during which the facility becomes eligible; and (ii) continue to file the annual Form R for the life of the contract for such facility.

(d) The Contracting Officer may terminate this contract or take other action as appropriate, if the Contractor fails to comply accurately and fully with the EPCRA and PPA toxic chemical release filing and reporting requirements.

(e) Except for acquisitions of commercial items, as defined in FAR Part 2, the Contractor shall--

(1) For competitive subcontracts expected to exceed \$100,000 (including all options), include a solicitation provision substantially the same as the provision at FAR 52.223-13, Certification of Toxic Chemical Release Reporting; and

(2) Include in any resultant subcontract exceeding \$100,000 (including all options), the substance of this clause, except this paragraph (e).

#### 52.227-1 AUTHORIZATION AND CONSENT (JUL 1995)

(a) The Government authorizes and consents to all use and manufacture, in performing this contract or any subcontract at any tier, of any invention described in and covered by a United States patent (1) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract or (2) used in machinery, tools, or methods whose use necessarily results from compliance by the Contractor or a subcontractor with (i) specifications or written provisions forming a part of this contract or (ii) specific written instructions given by the Contracting Officer directing the manner of performance. The entire liability to the Government for infringement of a patent of the United States shall be determined solely by the provisions of the indemnity clause, if any, included in this contract or any subcontract hereunder (including any lower-tier subcontract), and the Government assumes liability for all other infringement to the extent of the authorization and consent hereinabove granted.

(b) The Contractor agrees to include, and require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for supplies or services (including construction, architect-engineer services, and materials, supplies, models, samples, and design or testing services expected to exceed the simplified acquisition threshold (however, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.)

#### 52.227-2 NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (AUG 1996)

(a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.

(b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.

(c) The Contractor agrees to include, and require inclusion of, this clause in all subcontracts at any tier for supplies or services (including construction and architect-engineer subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed the simplified acquisition threshold at (FAR) 2.101.to exceed the dollar amount set forth in 13.000 of the Federal Acquisition Regulation (FAR).

(End of clause)

## 52.228-5 INSURANCE--WORK ON A GOVERNMENT INSTALLATION (JAN 1997)

(a) The Contractor shall, at its own expense, provide and maintain during the entire performance of this contract, at least the kinds and minimum amounts of insurance required in the Schedule or elsewhere in the contract.

(b) Before commencing work under this contract, the Contractor shall notify the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective (1) for such period as the laws of the State in which this contract is to be performed prescribe, or (2) until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

(c) The Contractor shall insert the substance of this clause, including this paragraph (c), in subcontracts under this contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Schedule or elsewhere in the contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

(End of clause)

## 52.229-3 FEDERAL, STATE, AND LOCAL TAXES (JAN 1991)

(a) "Contract date," as used in this clause, means the date set for bid opening or, if this is a negotiated contract or a modification, the effective date of this contract or modification.

"All applicable Federal, State, and local taxes and duties," as used in this clause, means all taxes and duties, in effect on the contract date, that the taxing authority is imposing and collecting on the transactions or property covered by this contract.

"After-imposed Federal tax," as used in this clause, means any new or increased Federal excise tax or duty, or tax that was exempted or excluded on the contract date but whose exemption was later revoked or reduced during the contract period, on the transactions or property covered by this contract that the Contractor is required to pay or bear as the result of legislative, judicial, or administrative action taking effect after the contract date. It does not include social security tax or other employment taxes.

"After-relieved Federal tax," as used in this clause, means any amount of Federal excise tax or duty, except social security or other employment taxes, that would otherwise have been payable on the transactions or property covered by this contract, but which the Contractor is not required to pay or bear, or for which the Contractor obtains a refund or drawback, as the result of legislative, judicial, or administrative action taking effect after the contract date.

(b) The contract price includes all applicable Federal, State, and local taxes and duties.

(c) The contract price shall be increased by the amount of any after-imposed Federal tax, provided the Contractor warrants in writing that no amount for such newly imposed Federal excise tax or duty or rate increase was included in the contract price, as a contingency reserve or otherwise.

(d) The contract price shall be decreased by the amount of any after-relieved Federal tax.

(e) The contract price shall be decreased by the amount of any Federal excise tax or duty, except social security or other employment taxes, that the Contractor is required to pay or bear, or does not obtain a refund of, through the Contractor's fault, negligence, or failure to follow instructions of the Contracting Officer.

(f) No adjustment shall be made in the contract price under this clause unless the amount of the adjustment exceeds \$250.

(g) The Contractor shall promptly notify the Contracting Officer of all matters relating to any Federal excise tax or duty that reasonably may be expected to result in either an increase or decrease in the contract price and shall take appropriate action as the Contracting Officer directs.

(h) The Government shall, without liability, furnish evidence appropriate to establish exemption from any Federal, State, or local tax when the Contractor requests such evidence and a reasonable basis exists to sustain the exemption.

(End of clause)

#### 52.229-5 TAXES--CONTRACTS PERFORMED IN U.S. POSSESSIONS OR PUERTO RICO (APR 1984)

The term "local taxes," as used in the Federal, State, and local taxes clause of this contract, includes taxes imposed by a possession of the United States or by Puerto Rico.

(End of clause)

#### 52.232-1 PAYMENTS (APR 1984)

The Government shall pay the Contractor, upon the submission of proper invoices or vouchers, the prices stipulated in this contract for supplies delivered and accepted or services rendered and accepted, less any deductions provided in this contract. Unless otherwise specified in this contract, payment shall be made on partial deliveries accepted by the Government if--

(a) The amount due on the deliveries warrants it; or

(b) The Contractor requests it and the amount due on the deliveries is at least \$1,000 or 50 percent of the total contract price.

#### 52.232-8 DISCOUNTS FOR PROMPT PAYMENT (MAY 1997)

(a) Discounts for prompt payment will not be considered in the evaluation of offers. However, any offered discount will form a part of the award, and will be taken if payment is made within the discount period indicated in the offer by the offeror. As an alternative to offering a prompt payment discount in conjunction with the offer, offerors awarded contracts may include prompt payment discounts on individual invoices.

(b) In connection with any discount offered for prompt payment, time shall be computed from the date of the invoice. If the Contractor has not placed a date on the invoice, the due date shall be calculated from the date the designated billing office receives a proper invoice, provided the agency annotates such invoice with the date of receipt at the time of receipt. For the purpose of computing the discount earned, payment shall be considered to have been made on the date that appears on the payment check or, for an electronic funds transfer, the specified payment date. When the discount date falls on a Saturday, Sunday, or legal holiday when Federal Government offices are closed and Government business is not expected to be conducted, payment may be made on the following business day.

#### 52.232-9 LIMITATION ON WITHHOLDING OF PAYMENTS (APR 1984)

If more than one clause or Schedule term of this contract authorizes the temporary withholding of amounts otherwise payable to the Contractor for supplies delivered or services performed, the total of the amounts withheld at any one time shall not exceed the greatest amount that may be withheld under any one clause or Schedule term at that time; provided, that this limitation shall not apply to--

- (a) Withholdings pursuant to any clause relating to wages or hours of employees;
- (b) Withholdings not specifically provided for by this contract;
- (c) The recovery of overpayments; and
- (d) Any other withholding for which the Contracting Officer determines that this limitation is inappropriate.

#### 52.232-11 EXTRAS (APR 1984)

Except as otherwise provided in this contract, no payment for extras shall be made unless such extras and the price therefore have been authorized in writing by the Contracting Officer.

#### 52.232-17 INTEREST (JUNE 1996)

(a) Except as otherwise provided in this contract under a Price Reduction for Defective Cost or Pricing Data clause or a Cost Accounting Standards clause, all amounts that become payable by the Contractor to the Government under this contract (net of any applicable tax credit under the Internal Revenue Code (26 U.S.C. 1481)) shall bear simple interest from the date due until paid unless paid within 30 days of becoming due. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in Section 12 of the Contract Disputes Act of 1978 (Public Law 95-563), which is applicable to the period in which the amount becomes due, as provided in paragraph (b) of this clause, and then at the rate applicable for each six-month period as fixed by the Secretary until the amount is paid. reproduce, prepare derivative works, distribute copies to the public, and (b) Amounts shall be due at the earliest of the following dates:

- (1) The date fixed under this contract.
  - (2) The date of the first written demand for payment consistent with this contract, including any demand resulting from a default termination.
  - (3) The date the Government transmits to the Contractor a proposed supplemental agreement to confirm completed negotiations establishing the amount of debt.
  - (4) If this contract provides for revision of prices, the date of written notice to the Contractor stating the amount of refund payable in connection with a pricing proposal or a negotiated pricing agreement not confirmed by contract modification.
- (c) The interest charge made under this clause may be reduced under the procedures prescribed in 32.614-2 of the Federal Acquisition Regulation in effect on the date of this contract.

#### 52.232-23 ASSIGNMENT OF CLAIMS (JAN 1986)

(a) The Contractor, under the Assignment of Claims Act, as amended, 31 U.S.C. 3727, 41 U.S.C. 15 (hereafter referred to as "the Act"), may assign its rights to be paid amounts due or to become due as a result of the performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency. The assignee under such an assignment may thereafter further assign or reassign its right under the original assignment to any type of financing institution described in the preceding sentence.

(b) Any assignment or reassignment authorized under the Act and this clause shall cover all unpaid amounts payable under this contract, and shall not be made to more than one party, except that an assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in the financing of this contract.

(c) The Contractor shall not furnish or disclose to any assignee under this contract any classified document (including this contract) or information related to work under this contract until the Contracting Officer authorizes such action in writing.

## 52.232-25 PROMPT PAYMENT (MAY 2001)

Notwithstanding any other payment clause in this contract, the Government will make invoice payments and contract financing payments under the terms and conditions specified in this clause. Payment shall be considered as being made on the day a check is dated or the date of an electronic funds transfer. Definitions of pertinent terms are set forth in sections 2.101 and 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see subparagraph (a)(4) of this clause concerning payments due on Saturdays, Sundays, and legal holidays.)

(a) Invoice payments. (1) Due date--(i) Except as indicated in subparagraph (a)(2) and paragraph (c) of this clause, the due date for making invoice payments by the designated payment office shall be the later of the following two events:

(A) The 30th day after the designated billing office has received a proper invoice from the Contractor (except as provided in subdivision (a)(1)(ii) of this clause).

(B) The 30th day after Government acceptance of supplies delivered or services performed by the Contractor. On a final invoice where the payment amount is subject to contract settlement actions, acceptance shall be deemed to have occurred on the effective date of the contract settlement.

(ii) If the designated billing office fails to annotate the invoice with the actual date of receipt at the time of receipt, the invoice payment due date shall be the 30th day after the date of the Contractor's invoice; provided a proper invoice is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(2) Certain food products and other payments. (i) Due dates on Contractor invoices for meat, meat food products, or fish; perishable agricultural commodities; and dairy products, edible fats or oils, and food products prepared from edible fats or oils are--

(A) For meat or meat food products, as defined in section 2(a)(3) of the Packers and Stockyard Act of 1921 (7 U.S.C. 182(3)), and as further defined in Pub. L. 98-181, including any edible fresh or frozen poultry meat, any perishable poultry meat food product, fresh eggs, and any perishable egg product, as close as possible to, but not later than, the 7th day after product delivery.

(B) For fresh or frozen fish, as defined in section 204(3) of the Fish and Seafood Promotion Act of 1986 (16 U.S.C. 4003(3)), as close as possible to, but not later than, the 7th day after product delivery.

(C) For perishable agricultural commodities, as defined in section 1(4) of the Perishable Agricultural Commodities Act of 1930 (7 U.S.C. 499a(4)), as close as possible to, but not later than, the 10th day after product delivery, unless another date is specified in the contract.

(D) For dairy products, as defined in section 111(e) of the Dairy Production Stabilization Act of 1983 (7 U.S.C. 4502(e)), edible fats or oils, and food products prepared from edible fats or oils, as close as possible to, but not later than, the 10th day after the date on which a proper invoice has been received. Liquid milk, cheese, certain processed cheese products, butter, yogurt, ice cream, mayonnaise, salad dressings, and other similar products, fall within this classification. Nothing in the Act limits this classification to refrigerated products. When questions arise regarding the proper classification of a specific product, prevailing industry practices will be followed in specifying a contract payment due date. The burden of proof that a classification of a specific product is, in fact, prevailing industry



practice is upon the Contractor making the representation.

(ii) If the contract does not require submission of an invoice for payment (e.g., periodic lease payments), the due date will be as specified in the contract.

(3) Contractor's invoice. The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in subdivisions (a)(3)(i) through (a)(3)(viii) of this clause. If the invoice does not comply with these requirements, it shall be returned within 7 days after the date the designated billing office received the invoice (3 days for meat, meat food products, or fish; 5 days for perishable agricultural commodities, edible fats or oils, and food products prepared from edible fats or oils), with a statement of the reasons why it is not a proper invoice. Untimely notification will be taken into account in computing any interest penalty owed the Contractor in the manner described in subparagraph (a)(5) of this clause.

(i) Name and address of the Contractor.

(ii) Invoice date. (The Contractor is encouraged to date invoices as close as possible to the date of the mailing or transmission.)

(iii) Contract number or other authorization for supplies delivered or services performed (including order number and contract line item number).

(iv) Description, quantity, unit of measure, unit price, and extended price of supplies delivered or services performed.

(v) Shipping and payment terms (e.g., shipment number and date of shipment, prompt payment discount terms). Bill of lading number and weight of shipment will be shown for shipments on Government bills of lading.

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

(vii) Name (where practicable), title, phone number, and mailing address of person to be notified in the event of a defective invoice.

(viii) Any other information or documentation required by the contract (such as evidence of shipment).

(ix) While not required, the Contractor is strongly encouraged to assign an identification number to each invoice.

(4) Interest penalty. An interest penalty shall be paid automatically by the designated payment office, without request from the Contractor, if payment is not made by the due date and the conditions listed in subdivisions (a)(4)(i) through (a)(4)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday when Federal Government offices are closed and Government business is not expected to be conducted, payment may be made on the following business day without incurring a late payment interest penalty.

(i) A proper invoice was received by the designated billing office.

(ii) A receiving report or other Government documentation authorizing payment was processed, and there was no disagreement over quantity, quality, or Contractor compliance with any contract term or condition.

(iii) In the case of a final invoice for any balance of funds due the Contractor for supplies delivered or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

(5) Computing penalty amount. The interest penalty shall be at the rate established by the Secretary of the Treasury under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) that is in effect on the day after the due date,

except where the interest penalty is prescribed by other governmental authority (e.g., tariffs). This rate is referred to as the "Renegotiation Board Interest Rate," and it is published in the Federal Register semiannually on or about January 1 and July 1. The interest penalty shall accrue daily on the invoice principal payment amount approved by the Government until the payment date of such approved principal amount; and will be compounded in 30-day increments inclusive from the first day after the due date through the payment date. That is, interest accrued at the end of any 30-day period will be added to the approved invoice principal payment amount and will be subject to interest penalties if not paid in the succeeding 30-day period. If the designated billing office failed to notify the Contractor of a defective invoice within the periods prescribed in subparagraph (a)(3) of this clause, the due date on the corrected invoice will be adjusted by subtracting from such date the number of days taken beyond the prescribed notification of defects period. Any interest penalty owed the Contractor will be based on this adjusted due date. Adjustments will be made by the designated payment office for errors in calculating interest penalties.

(i) For the sole purpose of computing an interest penalty that might be due the Contractor, Government acceptance shall be deemed to have occurred constructively on the 7th day (unless otherwise specified in this contract) after the Contractor delivered the supplies or performed the services in accordance with the terms and conditions of the contract, unless there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. In the event that actual acceptance occurs within the constructive acceptance period, the determination of an interest penalty shall be based on the actual date of acceptance. The constructive acceptance requirement does not, however, compel Government officials to accept supplies or services, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

(ii) The following periods of time will not be included in the determination of an interest penalty:

(A) The period taken to notify the Contractor of defects in invoices submitted to the Government, but this may not exceed 7 days (3 days for meat, meat food products, or fish; 5 days for perishable agricultural commodities, dairy products, edible fats or oils, and food products prepared from edible fats or oils).

(B) The period between the defects notice and resubmission of the corrected invoice by the Contractor.

(C) For incorrect electronic funds transfer (EFT) information, in accordance with the EFT clause of this contract.

(iii) Interest penalties will not continue to accrue after the filing of a claim for such penalties under the clause at 52.233-1, Disputes, or for more than 1 year. Interest penalties of less than \$1 need not be paid.

(iv) Interest penalties are not required on payment delays due to disagreement between the Government and the Contractor over the payment amount or other issues involving contract compliance or on amounts temporarily withheld or retained in accordance with the terms of the contract. Claims involving disputes, and any interest that may be payable, will be resolved in accordance with the clause at 52.233-1, Disputes.

(6) Prompt payment discounts. An interest penalty also shall be paid automatically by the designated payment office, without request from the Contractor, if a discount for prompt payment is taken improperly. The interest penalty will be calculated as described in subparagraph (a)(5) of this clause on the amount of discount taken for the period beginning with the first day after the end of the discount period through the date when the Contractor is paid.

(7) Additional interest penalty. (i) If this contract was awarded on or after October 1, 1989, a penalty amount, calculated in accordance with subdivision (a)(7)(iii) of this clause, shall be paid in addition to the interest penalty amount if the Contractor--

(A) Is owed an interest penalty of \$1 or more;

(B) Is not paid the interest penalty within 10 days after the date the invoice amount is paid; and

(C) Makes a written demand to the designated payment office for additional penalty payment, in accordance with subdivision (a)(7)(ii) of this clause, postmarked not later than 40 days after the invoice amount is paid.

(ii)(A) Contractors shall support written demands for additional penalty payments with the following data. No additional data shall be required. Contractors shall--

(1) Specifically assert that late payment interest is due under a specific invoice, and request payment of all overdue late payment interest penalty and such additional penalty as may be required;

(2) Attach a copy of the invoice on which the unpaid late payment interest was due; and

(3) State that payment of the principal has been received, including the date of receipt.

(B) Demands must be postmarked on or before the 40th day after payment was made, except that--

(1) If the postmark is illegible or nonexistent, the demand must have been received and annotated with the date of receipt by the designated payment office on or before the 40th day after payment was made; or

(2) If the postmark is illegible or nonexistent and the designated payment office fails to make the required annotation, the demand's validity will be determined by the date the Contractor has placed on the demand; provided such date is no later than the 40th day after payment was made.

(iii)(A) The additional penalty shall be equal to 100 percent of any original late payment interest penalty, except--

(1) The additional penalty shall not exceed \$5,000;

(2) The additional penalty shall never be less than \$25; and

(3) No additional penalty is owed if the amount of the underlying interest penalty is less than \$1.

(B) If the interest penalty ceases to accrue in accordance with the limits stated in subdivision (a)(5)(iii) of this clause, the amount of the additional penalty shall be calculated on the amount of interest penalty that would have accrued in the absence of these limits, subject to the overall limits on the additional penalty specified in subdivision (a)(7)(iii)(A) of this clause.

(C) For determining the maximum and minimum additional penalties, the test shall be the interest penalty due on each separate payment made for each separate contract. The maximum and minimum additional penalty shall not be based upon individual invoices unless the invoices are paid separately. Where payments are consolidated for disbursing purposes, the maximum and minimum additional penalty determination shall be made separately for each contract therein.

(D) The additional penalty does not apply to payments regulated by other Government regulations (e.g., payments under utility contracts subject to tariffs and regulation).

(b) Contract financing payments. (1) Due dates for recurring financing payments. If this contract provides for contract financing, requests for payment shall be submitted to the designated billing office as specified in this contract or as directed by the Contracting Officer. Contract financing payments shall be made on the [insert day as prescribed by Agency head; if not prescribed, insert 30th day] day after receipt of a proper contract financing request by the designated billing office. In the event that an audit or other review of a specific financing request is required to ensure compliance with the terms and conditions of the contract, the designated payment office is not compelled to make payment by the due date specified.

(2) Due dates for other contract financing. For advance payments, loans, or other arrangements that do not involve recurring submissions of contract financing requests, payment shall be made in accordance with the corresponding contract terms or as directed by the Contracting Officer.

(3) Interest penalty not applicable. Contract financing payments shall not be assessed an interest penalty for payment delays.

(c) Fast payment procedure due dates. If this contract contains the clause at 52.213-1, Fast Payment Procedure, payments will be made within 15 days after the date of receipt of the invoice.

**52.232-33 PAYMENT BY ELECTRONIC FUNDS TRANSFER—CENTRAL CONTRACTOR REGISTRATION (MAY 1999)**

(a) Method of payment. (1) All payments by the Government under this contract shall be made by electronic funds transfer (EFT), except as provided in paragraph (a)(2) of this clause. As used in this clause, the term “EFT” refers to the funds transfer and may also include the payment information transfer.

(2) In the event the Government is unable to release one or more payments by EFT, the Contractor agrees to either--

(i) Accept payment by check or some other mutually agreeable method of payment; or

(ii) Request the Government to extend the payment due date until such time as the Government can make payment by EFT (but see paragraph (d) of this clause).

(b) Contractor's EFT information. The Government shall make payment to the Contractor using the EFT information contained in the Central Contractor Registration (CCR) database. In the event that the EFT information changes, the Contractor shall be responsible for providing the updated information to the CCR database.

(c) Mechanisms for EFT payment. The Government may make payment by EFT through either the Automated Clearing House (ACH) network, subject to the rules of the National Automated Clearing House Association, or the Fedwire Transfer System. The rules governing Federal payments through the ACH are contained in 31 CFR part 210.

(d) Suspension of payment. If the Contractor's EFT information in the CCR database is incorrect, then the Government need not make payment to the Contractor under this contract until correct EFT information is entered into the CCR database; and any invoice or contract financing request shall be deemed not to be a proper invoice for the purpose of prompt payment under this contract. The prompt payment terms of the contract regarding notice of an improper invoice and delays in accrual of interest penalties apply.

(e) Contractor EFT arrangements. If the Contractor has identified multiple payment receiving points (i.e., more than one remittance address and/or EFT information set) in the CCR database, and the Contractor has not notified the Government of the payment receiving point applicable to this contract, the Government shall make payment to the first payment receiving point (EFT information set or remittance address as applicable) listed in the CCR database.

(f) Liability for uncompleted or erroneous transfers. (1) If an uncompleted or erroneous transfer occurs because the Government used the Contractor's EFT information incorrectly, the Government remains responsible for--

(i) Making a correct payment;

(ii) Paying any prompt payment penalty due; and

(iii) Recovering any erroneously directed funds.

(2) If an uncompleted or erroneous transfer occurs because the Contractor's EFT information was incorrect, or was revised within 30 days of Government release of the EFT payment transaction instruction to the Federal Reserve System, and--

(i) If the funds are no longer under the control of the payment office, the Government is deemed to have made payment and the Contractor is responsible for recovery of any erroneously directed funds; or

(ii) If the funds remain under the control of the payment office, the Government shall not make payment, and the provisions of paragraph (d) of this clause shall apply.

(g) EFT and prompt payment. A payment shall be deemed to have been made in a timely manner in accordance with the prompt payment terms of this contract if, in the EFT payment transaction instruction released to the Federal Reserve System, the date specified for settlement of the payment is on or before the prompt payment due date, provided the specified payment date is a valid date under the rules of the Federal Reserve System.

(h) EFT and assignment of claims. If the Contractor assigns the proceeds of this contract as provided for in the assignment of claims terms of this contract, the Contractor shall require as a condition of any such assignment, that the assignee shall register in the CCR database and shall be paid by EFT in accordance with the terms of this clause. In all respects, the requirements of this clause shall apply to the assignee as if it were the Contractor. EFT information that shows the ultimate recipient of the transfer to be other than the Contractor, in the absence of a proper assignment of claims acceptable to the Government, is incorrect EFT information within the meaning of paragraph (d) of this clause.

(i) Liability for change of EFT information by financial agent. The Government is not liable for errors resulting from changes to EFT information made by the Contractor's financial agent.

(j) Payment information. The payment or disbursing office shall forward to the Contractor available payment information that is suitable for transmission as of the date of release of the EFT instruction to the Federal Reserve System. The Government may request the Contractor to designate a desired format and method(s) for delivery of payment information from a list of formats and methods the payment office is capable of executing. However, the Government does not guarantee that any particular format or method of delivery is available at any particular payment office and retains the latitude to use the format and delivery method most convenient to the Government. If the Government makes payment by check in accordance with paragraph (a) of this clause, the Government shall mail the payment information to the remittance address contained in the CCR database.

(End of Clause)

#### 52.233-1 DISPUTES. (DEC 1998)

(a) This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613).

(b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

(c) "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. A claim arising under a contract, unlike a claim relating to that contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding \$100,000 is not a claim under the Act until certified as required by subparagraph (d)(2) of this clause. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

(d)(1) A claim by the Contractor shall be made in writing and, unless otherwise stated in this contract, submitted within 6 years after accrual of the claim to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be subject to a written decision by the Contracting Officer.

(2)(i) The contractors shall provide the certification specified in subparagraph (d)(2)(iii) of this clause when submitting any claim -

(A) Exceeding \$100,000; or

(B) Regardless of the amount claimed, when using -

(1) Arbitration conducted pursuant to 5 U.S.C. 575-580; or

(2) Any other alternative means of dispute resolution (ADR) technique that the agency elects to handle in accordance with the Administrative Dispute Resolution Act (ADRA).

(ii) The certification requirement does not apply to issues in controversy that have not been submitted as all or part of a claim.

(iii) The certification shall state as follows: "I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the Contractor.

(3) The certification may be executed by any person duly authorized to bind the Contractor with respect to the claim.

(e) For Contractor claims of \$100,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor-certified claims over \$100,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.

(f) The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.

(g) If the claim by the Contractor is submitted to the Contracting Officer or a claim by the Government is presented to the Contractor, the parties, by mutual consent, may agree to use alternative dispute resolution (ADR). If the Contractor refuses an offer for ADR, the Contractor shall inform the Contracting Officer, in writing, of the Contractor's specific reasons for rejecting the request.

(h) The Government shall pay interest on the amount found due and unpaid from (1) the date the Contracting Officer receives the claim (certified, if required); or (2) the date that payment otherwise would be due, if that date is later, until the date of payment. With regard to claims having defective certifications, as defined in (FAR) 48 CFR 33.201, interest shall be paid from the date that the Contracting Officer initially receives the claim. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

(i) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

(End of clause)

#### 52.233-3 PROTEST AFTER AWARD (AUG. 1996)

(a) Upon receipt of a notice of protest (as defined in FAR 33.101) or a determination that a protest is likely (see FAR 33.102(d)), the Contracting Officer may, by written order to the Contractor, direct the Contractor to stop performance of the work called for by this contract. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Upon receipt of the final decision in the protest, the Contracting Officer shall either--

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled either before or after a final decision in the protest, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if--

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to an adjustment within 30 days after the end of the period of work stoppage; provided, that if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon a proposal at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

(e) The Government's rights to terminate this contract at any time are not affected by action taken under this clause.

(f) If, as the result of the Contractor's intentional or negligent misstatement, misrepresentation, or miscertification, a protest related to this contract is sustained, and the Government pays costs, as provided in FAR 33.102(b)(2) or 33.104(h)(1), the Government may require the Contractor to reimburse the Government the amount of such costs. In addition to any other remedy available, and pursuant to the requirements of Subpart 32.6, the Government may collect this debt by offsetting the amount against any payment due the Contractor under any contract between the Contractor and the Government.

#### 52.237-2 PROTECTION OF GOVERNMENT BUILDINGS, EQUIPMENT, AND VEGETATION (APR 1984)

The Contractor shall use reasonable care to avoid damaging existing buildings, equipment, and vegetation on the Government installation. If the Contractor's failure to use reasonable care causes damage to any of this property, the Contractor shall replace or repair the damage at no expense to the Government as the Contracting Officer directs. If the Contractor fails or refuses to make such repair or replacement, the Contractor shall be liable for the cost, which may be deducted from the contract price.

#### 52.242-13 BANKRUPTCY (JUL 1995)

In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish, by certified mail or electronic commerce method authorized by the contract, written notification of the bankruptcy to the Contracting Officer responsible for administering the contract. This notification shall be furnished within five days of the initiation of the proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of Government contract numbers and contracting offices for all Government contracts against which final payment has not been made. This obligation remains in effect until final payment under this contract.

(End of clause)

## 52.243-1 CHANGES--FIXED-PRICE (AUG 1987) - ALTERNATE I (APR 1984)

(a) The Contracting Officer may at any time, by written order, and without notice to the sureties, if any, make changes within the general scope of this contract in any one or more of the following:

(1) Description of services to be performed.

(2) Time of performance (i.e., hours of the day, days of the week, etc.).

(3) Place of performance of the services.

(b) If any such change causes an increase or decrease in the cost of, or the time required for, performance of any part of the work under this contract, whether or not changed by the order, the Contracting Officer shall make an equitable adjustment in the contract price, the delivery schedule, or both, and shall modify the contract.

(c) The Contractor must assert its right to an adjustment under this clause within 30 days from the date of receipt of the written order. However, if the Contracting Officer decides that the facts justify it, the Contracting Officer may receive and act upon a proposal submitted before final payment of the contract.

(d) If the Contractor's proposal includes the cost of property made obsolete or excess by the change, the Contracting Officer shall have the right to prescribe the manner of the disposition of the property.

(e) Failure to agree to any adjustment shall be a dispute under the Disputes clause. However, nothing in this clause shall excuse the Contractor from proceeding with the contract as changed.

## 52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS (MAY 2001)

(a) Definitions. As used this clause--

"Commercial item", has the meaning contained in the clause at 52.202-1, Definitions.

"Subcontract", includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c)(1) The following clauses shall be flowed down to subcontracts for commercial items:

(i) 52.219-8, Utilization of Small Business Concerns (OCT 2000) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$500,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (FEB 1999) (E.O. 11246).

(iii) 52.222-35, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (APR 1998) (38 U.S.C. 4212(a)).

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (JUN 1998) (29 U.S.C. 793).

(v) 52.247-64, Preference for Privately Owned U.S.-Flagged Commercial Vessels (JUN 2000) (46 U.S.C. Appx 1241) (flowdown not required for subcontracts awarded beginning May 1, 1996).



(2) While not required, the Contractor may flow down to subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

#### 52.246-25 LIMITATION OF LIABILITY--SERVICES (FEB 1997)

(a) Except as provided in paragraphs (b) and (c) below, and except to the extent that the Contractor is expressly responsible under this contract for deficiencies in the services required to be performed under it (including any materials furnished in conjunction with those services), the Contractor shall not be liable for loss of or damage to property of the Government that (1) occurs after Government acceptance of services performed under this contract, and (2) results from any defects or deficiencies in the services performed or materials furnished.

(b) The limitation of liability under paragraph (a) above shall not apply when a defect or deficiency in, or the Government's acceptance of, services performed or materials furnished results from willful misconduct or lack of good faith on the part of any of the Contractor's managerial personnel. The term "Contractor's managerial personnel," as used in this clause, means the Contractor's directors, officers, and any of the Contractor's managers, superintendents, or equivalent representatives who have supervision or direction of--

(1) All or substantially all of the Contractor's business;

(2) All or substantially all of the Contractor's operations at any one plant, laboratory, or separate location at which the contract is being performed; or

(3) A separate and complete major industrial operation connected with the performance of this contract.

(c) If the Contractor carries insurance, or has established a reserve for self-insurance, covering liability for loss or damage suffered by the Government through the Contractor's performance of services or furnishing of materials under this contract, the Contractor shall be liable to the Government, to the extent of such insurance or reserve, for loss of or damage to property of the Government occurring after Government acceptance of, and resulting from any defects and deficiencies in, services performed or materials furnished under this contract.

#### 52.248-1 VALUE ENGINEERING (FEB 2000)

(a) General. The Contractor is encouraged to develop, prepare, and submit value engineering change proposals (VECP's) voluntarily. The Contractor shall share in any net acquisition savings realized from accepted VECP's, in accordance with the incentive sharing rates in paragraph (f) below.

(b) Definitions. "**Acquisition** savings," as used in this clause, means savings resulting from the application of a VECP to contracts awarded by the same contracting office or its successor for essentially the same unit. Acquisition savings include--

(1) Instant contract savings, which are the net cost reductions on this, the instant contract, and which are equal to the instant unit cost reduction multiplied by the number of instant contract units affected by the VECP, less the Contractor's allowable development and implementation costs;

(2) Concurrent contract savings, which are net reductions in the prices of other contracts that are definitized and ongoing at the time the VECP is accepted; and

(3) Future contract savings, which are the product of the future unit cost reduction multiplied by the number of future contract units in the sharing base. On an instant contract, future contract savings include savings on increases in quantities after VECP acceptance that are due to contract modifications, exercise of options, additional orders, and funding of subsequent year requirements on a multiyear contract.

"Collateral costs," as used in this clause, means agency cost of operation, maintenance, logistic support, or Government-furnished property.

"Collateral savings," as used in this clause, means those measurable net reductions resulting from a VECP in the agency's overall projected collateral costs, exclusive of acquisition savings, whether or not the acquisition cost changes.

"Contracting office" includes any contracting office that the acquisition is transferred to, such as another branch of the agency or another agency's office that is performing a joint acquisition action.

"Contractor's development and implementation costs," as used in this clause, means those costs the Contractor incurs on a VECP specifically in developing, testing, preparing, and submitting the VECP, as well as those costs the Contractor incurs to make the contractual changes required by Government acceptance of a VECP.

"Future unit cost reduction," as used in this clause, means the instant unit cost reduction adjusted as the Contracting Officer considers necessary for projected learning or changes in quantity during the sharing period. It is calculated at the time the VECP is accepted and applies either (1) throughout the sharing period, unless the Contracting Officer decides that recalculation is necessary because conditions are significantly different from those previously anticipated or (2) to the calculation of a lump-sum payment, which cannot later be revised.

"Government costs," as used in this clause, means those agency costs that result directly from developing and implementing the VECP, such as any net increases in the cost of testing, operations, maintenance, and logistics support. The term does not include the normal administrative costs of processing the VECP or any increase in this contract's cost or price resulting from negative instant contract savings.

"Instant contract," as used in this clause, means this contract, under which the VECP is submitted. It does not include increases in quantities after acceptance of the VECP that are due to contract modifications, exercise of options, or additional orders. If this is a multiyear contract, the term does not include quantities funded after VECP acceptance. If this contract is a fixed-price contract with prospective price redetermination, the term refers to the period for which firm prices have been established.

"Instant unit cost reduction" means the amount of the decrease in unit cost of performance (without deducting any Contractor's development or implementation costs) resulting from using the VECP on this, the instant contract. If this is a service contract, the instant unit cost reduction is normally equal to the number of hours per line-item task saved by using the VECP on this contract, multiplied by the appropriate contract labor rate.

"Negative instant contract savings" means the increase in the cost or price of this contract when the acceptance of a VECP results in an excess of the Contractor's allowable development and implementation costs over the product of the instant unit cost reduction multiplied by the number of instant contract units affected.

"Net acquisition savings" means total acquisition savings, including instant, concurrent, and future contract savings, less Government costs.

"Sharing base," as used in this clause, means the number of affected end items on contracts of the contracting office accepting the VECP.

Sharing period, as used in this clause, means the period beginning with acceptance of the first unit incorporating the VECP and ending at a calendar date or event determined by the contracting officer for each VECP.

"Unit," as used in this clause, means the item or task to which the Contracting Officer and the Contractor agree the VECP applies.

"Value engineering change proposal (VECP)" means a proposal that--

- (1) Requires a change to this, the instant contract, to implement; and
- (2) Results in reducing the overall projected cost to the agency without impairing essential functions or characteristics; provided, that it does not involve a change--
  - (i) In deliverable end item quantities only;
  - (ii) In research and development (R&D) end items or R&D test quantities that is due solely to results of previous testing under this contract; or
  - (iii) To the contract type only.
- (c) VECP preparation. As a minimum, the Contractor shall include in each VECP the information described in subparagraphs (1) through (8) below. If the proposed change is affected by contractually required configuration management or similar procedures, the instructions in those procedures relating to format, identification, and priority assignment shall govern VECP preparation. The VECP shall include the following:
  - (1) A description of the difference between the existing contract requirement and the proposed requirement, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are being altered, the effect of the change on the end item's performance, and any pertinent objective test data.
  - (2) A list and analysis of the contract requirements that must be changed if the VECP is accepted, including any suggested specification revisions.
  - (3) Identification of the unit to which the VECP applies.
  - (4) A separate, detailed cost estimate for (i) the affected portions of the existing contract requirement and (ii) the VECP. The cost reduction associated with the VECP shall take into account the Contractor's allowable development and implementation costs, including any amount attributable to subcontracts under the Subcontracts paragraph of this clause, below.
  - (5) A description and estimate of costs the Government may incur in implementing the VECP, such as test and evaluation and operating and support costs.
  - (6) A prediction of any effects the proposed change would have on collateral costs to the agency.
  - (7) A statement of the time by which a contract modification accepting the VECP must be issued in order to achieve the maximum cost reduction, noting any effect on the contract completion time or delivery schedule.
  - (8) Identification of any previous submissions of the VECP, including the dates submitted, the agencies and contract numbers involved, and previous Government actions, if known.
- (d) Submission. The Contractor shall submit VECP's to the Contracting Officer, unless this contract states otherwise. If this contract is administered by other than the contracting office, the Contractor shall submit a copy of the VECP simultaneously to the Contracting Officer and to the Administrative Contracting Officer.
- (e) Government action. (1) The Contracting Officer will notify the Contractor of the status of the VECP within 45 calendar days after the contracting office receives it. If additional time is required, the Contracting Officer will notify the Contractor within the 45-day period and provide the reason for the delay and the expected date of the decision. The Government will process VECP's expeditiously; however, it shall not be liable for any delay in acting upon a VECP.
  - (2) If the VECP is not accepted, the Contracting Officer will notify the Contractor in writing, explaining the reasons for rejection. The Contractor may withdraw any VECP, in whole or in part, at any time before it is accepted by the

Government. The Contracting Officer may require that the Contractor provide written notification before undertaking significant expenditures for VECP effort.

(3) Any VECP may be accepted, in whole or in part, by the Contracting Officer's award of a modification to this contract citing this clause and made either before or within a reasonable time after contract performance is completed. Until such a contract modification applies a VECP to this contract, the Contractor shall perform in accordance with the existing contract. The decision to accept or reject all or part of any VECP is a unilateral decision made solely at the discretion of the Contracting Officer.

(f) Sharing rates. If a VECP is accepted, the Contractor shall share in net acquisition savings according to the percentages shown in the table below. The percentage paid the Contractor depends upon (1) this contract's type (fixed-price, incentive, or cost-reimbursement), (2) the sharing arrangement specified in paragraph (a) above (incentive, program requirement, or a combination as delineated in the Schedule), and (3) the source of the savings (the instant contract, or concurrent and future contracts), as follows:

Government/Contractor Shares of Net Acquisition Savings  
[Figures in percent]

Sharing arrangement

Contract type	Incentive (voluntary)		Program requirement (mandatory)	
	Concurrent and Instant future contract contract rate		Concurrent and Instant future contract contract rate	
Fixed-price (includes fixed-price-award-fee; excludes other fixed-price incentive contracts).....	\1\	50/50	\1\	50/50
Incentive (fixed-price or cost) (other than award fee).....	(\2\)	\1\	50/50	(\2\)
Cost-reimbursement (includes cost-plus-award-fee; excludes other cost-type incentive contracts).....	\3\	75/25	\3\	75/25

\1\ The contracting officer may increase the contractor's sharing rate to as high as 75 percent for each VECP. (See 48.102(g) (1) through (7).)

\2\ Same sharing arrangement as the contract's profit or fee adjustment formula.

\3\ The contracting officer may increase the contractor's sharing rate to as high as 50 percent for each VECP. (See 48.102(g) (1) through (7).)

(g) Calculating net acquisition savings.

(1) Acquisition savings are realized when (i) the cost or price is reduced on the instant contract, (ii) reductions are negotiated in concurrent contracts, (iii) future contracts are awarded, or (iv) agreement is reached on a lump-sum payment for future contract savings (see subparagraph (i)(4) below). Net acquisition savings are first realized, and the Contractor shall be paid a share, when Government costs and any negative instant contract savings have been fully offset against acquisition savings.

(2) Except in incentive contracts, Government costs and any price or cost increases resulting from negative instant contract savings shall be offset against acquisition savings each time such savings are realized until they are fully offset. Then, the Contractor's share is calculated by multiplying net acquisition savings by the appropriate Contractor's percentage sharing rate (see paragraph (f) above). Additional Contractor shares of net acquisition savings shall be paid to the Contractor at the time realized.

(3) If this is an incentive contract, recovery of Government costs on the instant contract shall be deferred and offset against concurrent and future contract savings. The Contractor shall share through the contract incentive structure in savings on the instant contract items affected. Any negative instant contract savings shall be added to the target cost or to the target price and ceiling price, and the amount shall be offset against concurrent and future contract savings.

(4) If the Government does not receive and accept all items on which it paid the Contractor's share, the Contractor shall reimburse the Government for the proportionate share of these payments.

(h) Contract adjustment. The modification accepting the VECP (or a subsequent modification issued as soon as possible after any negotiations are completed) shall--

(1) Reduce the contract price or estimated cost by the amount of instant contract savings, unless this is an incentive contract;

(2) When the amount of instant contract savings is negative, increase the contract price, target price and ceiling price, target cost, or estimated cost by that amount;

(3) Specify the Contractor's dollar share per unit on future contracts, or provide the lump-sum payment;

(4) Specify the amount of any Government costs or negative instant contract savings to be offset in determining net acquisition savings realized from concurrent or future contract savings; and

(5) Provide the Contractor's share of any net acquisition savings under the instant contract in accordance with the following:

(i) Fixed-price contracts--add to contract price.

(ii) Cost-reimbursement contracts--add to contract fee.

(i) Concurrent and future contract savings.

(1) Payments of the Contractor's share of concurrent and future contract savings shall be made by a modification to the instant contract in accordance with subparagraph (h)(5) above. For incentive contracts, shares shall be added as a separate firm-fixed-price line item on the instant contract. The Contractor shall maintain records adequate to identify the first delivered unit for 3 years after final payment under this contract.

(2) The Contracting Officer shall calculate the Contractor's share of concurrent contract savings by (i) subtracting from the reduction in price negotiated on the concurrent contract any Government costs or negative instant contract savings not yet offset and (ii) multiplying the result by the Contractor's sharing rate.

(3) The Contracting Officer shall calculate the Contractor's share of future contract savings by (i) multiplying the future unit cost reduction by the number of future contract units scheduled for delivery during the sharing period, (ii) subtracting any Government costs or negative instant contract savings not yet offset, and (iii) multiplying the result by the Contractor's sharing rate.

(4) When the Government wishes and the Contractor agrees, the Contractor's share of future contract savings may be paid in a single lump sum rather than in a series of payments over time as future contracts are awarded. Under this alternate procedure, the future contract savings may be calculated when the VECP is accepted, on the basis of the Contracting Officer's forecast of the number of units that will be delivered during the sharing period. The Contractor's share shall be included in a modification to this contract (see subparagraph (h)(3) above) and shall not be subject to subsequent adjustment.

(5) Alternate no-cost settlement method. When, in accordance with subsection 48.104-4 of the Federal Acquisition Regulation, the Government and the Contractor mutually agree to use the no-cost settlement method, the following applies:

- (i) The Contractor will keep all the savings on the instant contract and on its concurrent contracts only.
- (ii) The Government will keep all the savings resulting from concurrent contracts placed on other sources, savings from all future contracts, and all collateral savings.
- (j) Collateral savings. If a VECP is accepted, the Contracting Officer will increase the instant contract amount, as specified in paragraph (h)(5) of this clause, by a rate from 20 to 100 percent, as determined by the Contracting Officer, of any projected collateral savings determined to be realized in a typical year of use after subtracting any Government costs not previously offset. However, the Contractor's share of collateral savings will not exceed the contract's firm-fixed-price, target price, target cost, or estimated cost, at the time the VECP is accepted, or \$100,000, whichever is greater. The Contracting Officer will be the sole determiner of the amount of collateral savings.
- (k) Relationship to other incentives. Only those benefits of an accepted VECP not rewardable under performance, design-to-cost (production unit cost, operating and support costs, reliability and maintainability), or similar incentives shall be rewarded under this clause. However, the targets of such incentives affected by the VECP shall not be adjusted because of VECP acceptance. If this contract specifies targets but provides no incentive to surpass them, the value engineering sharing shall apply only to the amount of achievement better than target.
- (l) Subcontracts. The Contractor shall include an appropriate value engineering clause in any subcontract of \$100,000 or more and may include one in subcontracts of lesser value. In calculating any adjustment in this contract's price for instant contract savings (or negative instant contract savings), the Contractor's allowable development and implementation costs shall include any subcontractor's allowable development and implementation costs, and any value engineering incentive payments to a subcontractor, clearly resulting from a VECP accepted by the Government under this contract. The Contractor may choose any arrangement for subcontractor value engineering incentive payments; provided, that the payments shall not reduce the Government's share of concurrent or future contract savings or collateral savings.
- (m) Data. The Contractor may restrict the Government's right to use any part of a VECP or the supporting data by marking the following legend on the affected parts:
- "These data, furnished under the Value Engineering clause of contract . . . . . , shall not be disclosed outside the Government or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a value engineering change proposal submitted under the clause. This restriction does not limit the Government's right to use information contained in these data if it has been obtained or is otherwise available from the Contractor or from another source without limitations."
- If a VECP is accepted, the Contractor hereby grants the Government unlimited rights in the VECP and supporting data, except that, with respect to data qualifying and submitted as limited rights technical data, the Government shall have the rights specified in the contract modification implementing the VECP and shall appropriately mark the data. (The terms "unlimited rights" and "limited rights" are defined in Part 27 of the Federal Acquisition Regulation.)

(End of clause)

#### 52.249-2 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (SEP 1996)

- (a) The Government may terminate performance of work under this contract in whole or, from time to time, in part if the Contracting Officer determines that a termination is in the Government's interest. The Contracting Officer shall terminate by delivering to the Contractor a Notice of Termination specifying the extent of termination and the effective date.
- (b) After receipt of a Notice of Termination, and except as directed by the Contracting Officer, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due under this clause:

- (1) Stop work as specified in the notice.
  - (2) Place no further subcontracts or orders (referred to as subcontracts in this clause) for materials, services, or facilities, except as necessary to complete the continued portion of the contract.
  - (3) Terminate all subcontracts to the extent they relate to the work terminated.
  - (4) Assign to the Government, as directed by the Contracting Officer, all right, title, and interest of the Contractor under the subcontracts terminated, in which case the Government shall have the right to settle or to pay any termination settlement proposal arising out of those terminations.
  - (5) With approval or ratification to the extent required by the Contracting Officer, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts; the approval or ratification will be final for purposes of this clause.
  - (6) As directed by the Contracting Officer, transfer title and deliver to the Government (i) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced or acquired for the work terminated, and (ii) the completed or partially completed plans, drawings, information, and other property that, if the contract had been completed, would be required to be furnished to the Government.
  - (7) Complete performance of the work not terminated.
  - (8) Take any action that may be necessary, or that the Contracting Officer may direct, for the protection and preservation of the property related to this contract that is in the possession of the Contractor and in which the Government has or may acquire an interest.
  - (9) Use its best efforts to sell, as directed or authorized by the Contracting Officer, any property of the types referred to in subparagraph (b)(6) of this clause; provided, however, that the Contractor (i) is not required to extend credit to any purchaser and (ii) may acquire the property under the conditions prescribed by, and at prices approved by, the Contracting Officer. The proceeds of any transfer or disposition will be applied to reduce any payments to be made by the Government under this contract, credited to the price or cost of the work, or paid in any other manner directed by the Contracting Officer.
- (c) The Contractor shall submit complete termination inventory schedules no later than 120 days from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 120-day period.
- (d) After expiration of the plant clearance period as defined in Subpart 45.6 of the Federal Acquisition Regulation, the Contractor may submit to the Contracting Officer a list, certified as to quantity and quality, of termination inventory not previously disposed of, excluding items authorized for disposition by the Contracting Officer. The Contractor may request the Government to remove those items or enter into an agreement for their storage. Within 15 days, the Government will accept title to those items and remove them or enter into a storage agreement. The Contracting Officer may verify the list upon removal of the items, or if stored, within 45 days from submission of the list, and shall correct the list, as necessary, before final settlement.
- (e) After termination, the Contractor shall submit a final termination settlement proposal to the Contracting Officer in the form and with the certification prescribed by the Contracting Officer. The Contractor shall submit the proposal promptly, but no later than 1 year from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 1-year period. However, if the Contracting Officer determines that the facts justify it, a termination settlement proposal may be received and acted on after 1 year or any extension. If the Contractor fails to submit the proposal within the time allowed, the Contracting Officer may determine, on the basis of information available, the amount, if any, due the Contractor because of the termination and shall pay the amount determined.

(f) Subject to paragraph (e) of this clause, the Contractor and the Contracting Officer may agree upon the whole or any part of the amount to be paid or remaining to be paid because of the termination. The amount may include a reasonable allowance for profit on work done. However, the agreed amount, whether under this paragraph (g) or paragraph (g) of this clause, exclusive of costs shown in subparagraph (g)(3) of this clause, may not exceed the total contract price as reduced by (1) the amount of payments previously made and (2) the contract price of work not terminated. The contract shall be modified, and the Contractor paid the agreed amount. Paragraph (g) of this clause shall not limit, restrict, or affect the amount that may be agreed upon to be paid under this paragraph.

(g) If the Contractor and the Contracting Officer fail to agree on the whole amount to be paid because of the termination of work, the Contracting Officer shall pay the Contractor the amounts determined by the Contracting Officer as follows, but without duplication of any amounts agreed on under paragraph (f) of this clause:

(1) The contract price for completed supplies or services accepted by the Government (or sold or acquired under subparagraph (b)(9) of this clause) not previously paid for, adjusted for any saving of freight and other charges.

(2) The total of--

(i) The costs incurred in the performance of the work terminated, including initial costs and preparatory expense allocable thereto, but excluding any costs attributable to supplies or services paid or to be paid under subparagraph (f)(1) of this clause;

(ii) The cost of settling and paying termination settlement proposals under terminated subcontracts that are properly chargeable to the terminated portion of the contract if not included in subdivision (g)(2)(i) of this clause; and

(iii) A sum, as profit on subdivision (g)(2)(i) of this clause, determined by the Contracting Officer under 49.202 of the Federal Acquisition Regulation, in effect on the date of this contract, to be fair and reasonable; however, if it appears that the Contractor would have sustained a loss on the entire contract had it been completed, the Contracting Officer shall allow no profit under this subdivision (iii) and shall reduce the settlement to reflect the indicated rate of loss.

(3) The reasonable costs of settlement of the work terminated, including--

(i) Accounting, legal, clerical, and other expenses reasonably necessary for the preparation of termination settlement proposals and supporting data;

(ii) The termination and settlement of subcontracts (excluding the amounts of such settlements); and

(iii) Storage, transportation, and other costs incurred, reasonably necessary for the preservation, protection, or disposition of the termination inventory.

(h) Except for normal spoilage, and except to the extent that the Government expressly assumed the risk of loss, the Contracting Officer shall exclude from the amounts payable to the Contractor under paragraph (g) of this clause, the fair value, as determined by the Contracting Officer, of property that is destroyed, lost, stolen, or damaged so as to become undeliverable to the Government or to a buyer.

(i) The cost principles and procedures of Part 31 of the Federal Acquisition Regulation, in effect on the date of this contract, shall govern all costs claimed, agreed to, or determined under this clause.

(j) The Contractor shall have the right of appeal, under the Disputes clause, from any determination made by the Contracting Officer under paragraph (e), (g), or (l) of this clause, except that if the Contractor failed to submit the termination settlement proposal or request for equitable adjustment within the time provided in paragraph (e) or (l), respectively, and failed to request a time extension, there is no right of appeal.

(k) In arriving at the amount due the Contractor under this clause, there shall be deducted--



- (1) All unliquidated advance or other payments to the Contractor under the terminated portion of this contract;
  - (2) Any claim which the Government has against the Contractor under this contract; and
  - (3) The agreed price for, or the proceeds of sale of, materials, supplies, or other things acquired by the Contractor or sold under the provisions of this clause and not recovered by or credited to the Government.
- (l) If the termination is partial, the Contractor may file a proposal with the Contracting Officer for an equitable adjustment of the price(s) of the continued portion of the contract. The Contracting Officer shall make any equitable adjustment agreed upon. Any proposal by the Contractor for an equitable adjustment under this clause shall be requested within 90 days from the effective date of termination unless extended in writing by the Contracting Officer.
- (m)(1) The Government may, under the terms and conditions it prescribes, make partial payments and payments against costs incurred by the Contractor for the terminated portion of the contract, if the Contracting Officer believes the total of these payments will not exceed the amount to which the Contractor will be entitled.
- (2) If the total payments exceed the amount finally determined to be due, the Contractor shall repay the excess to the Government upon demand, together with interest computed at the rate established by the Secretary of the Treasury under 50 U.S.C. App. 1215(b)(2). Interest shall be computed for the period from the date the excess payment is received by the Contractor to the date the excess is repaid. Interest shall not be charged on any excess payment due to a reduction in the Contractor's termination settlement proposal because of retention or other disposition of termination inventory until 10 days after the date of the retention or disposition, or a later date determined by the Contracting Officer because of the circumstances.
- (n) Unless otherwise provided in this contract or by statute, the Contractor shall maintain all records and documents relating to the terminated portion of this contract for 3 years after final settlement. This includes all books and other evidence bearing on the Contractor's costs and expenses under this contract. The Contractor shall make these records and documents available to the Government, at the Contractor's office, at all reasonable times, without any direct charge. If approved by the Contracting Officer, photographs, microphotographs, or other authentic reproductions may be maintained instead of original records and documents.

#### 52.249-8 DEFAULT (FIXED-PRICE SUPPLY AND SERVICE) (APR 1984)

- (a)(1) The Government may, subject to paragraphs (c) and (d) of this clause, by written notice of default to the Contractor, terminate this contract in whole or in part if the Contractor fails to--
- (i) Deliver the supplies or to perform the services within the time specified in this contract or any extension;
  - (ii) Make progress, so as to endanger performance of this contract (but see subparagraph (a)(2) of this clause); or
  - (iii) Perform any of the other provisions of this contract (but see subparagraph (a)(2) below).
- (2) The Government's right to terminate this contract under subdivisions (a)(1)(ii) and (1)(iii) of this clause, may be exercised if the Contractor does not cure such failure within 10 days (or more if authorized in writing by the Contracting Officer) after receipt of the notice from the Contracting Officer specifying the failure.
- (b) If the Government terminates this contract in whole or in part, it may acquire, under the terms and in the manner the Contracting Officer considers appropriate, supplies or services similar to those terminated, and the Contractor will be liable to the Government for any excess costs for those supplies or services. However, the Contractor shall continue the work not terminated.
- (c) Except for defaults of subcontractors at any tier, the Contractor shall not be liable for any excess costs if the failure to perform the contract arises from causes beyond the control and without the fault or negligence of the

Contractor. Examples of such causes include (1) acts of God or of the public enemy, (2) acts of the Government in either its sovereign or contractual capacity, (3) fires, (4) floods, (5) epidemics, (6) quarantine restrictions, (7) strikes, (8) freight embargoes, and (9) unusually severe weather. In each instance the failure to perform must be beyond the control and without the fault or negligence of the Contractor.

(d) If the failure to perform is caused by the default of a subcontractor at any tier, and if the cause of the default is beyond the control of both the Contractor and subcontractor, and without the fault or negligence of either, the Contractor shall not be liable for any excess costs for failure to perform, unless the subcontracted supplies or services were obtainable from other sources in sufficient time for the Contractor to meet the required delivery schedule.

(e) If this contract is terminated for default, the Government may require the Contractor to transfer title and deliver to the Government, as directed by the Contracting Officer, any (1) completed supplies, and (2) partially completed supplies and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (collectively referred to as "manufacturing materials" in this clause) that the Contractor has specifically produced or acquired for the terminated portion of this contract. Upon direction of the Contracting Officer, the Contractor shall also protect and preserve property in its possession in which the Government has an interest.

(f) The Government shall pay contract price for completed supplies delivered and accepted. The Contractor and Contracting Officer shall agree on the amount of payment for manufacturing materials delivered and accepted and for the protection and preservation of the property. Failure to agree will be a dispute under the Disputes clause. The Government may withhold from these amounts any sum the Contracting Officer determines to be necessary to protect the Government against loss because of outstanding liens or claims of former lien holders.

(g) If, after termination, it is determined that the Contractor was not in default, or that the default was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the Government.

(h) The rights and remedies of the Government in this clause are in addition to any other rights and remedies provided by law or under this contract.

#### 52.253-1 COMPUTER GENERATED FORMS (JAN 1991)

(a) Any data required to be submitted on a Standard or Optional Form prescribed by the Federal Acquisition Regulation (FAR) may be submitted on a computer generated version of the form, provided there is no change to the name, content, or sequence of the data elements on the form, and provided the form carries the Standard or Optional Form number and edition date.

(b) Unless prohibited by agency regulations, any data required to be submitted on an agency unique form prescribed by an agency supplement to the FAR may be submitted on a computer generated version of the form provided there is no change to the name, content, or sequence of the data elements on the form and provided the form carries the agency form number and edition date.

(c) If the Contractor submits a computer generated version of a form that is different than the required form, then the rights and obligations of the parties will be determined based on the content of the required form.

#### 252.201-7000 CONTRACTING OFFICER'S REPRESENTATIVE (DEC 1991)

(a) "Definition. Contracting officer's representative" means an individual designated in accordance with subsection 201.602-2 of the Defense Federal Acquisition Regulation Supplement and authorized in writing by the contracting officer to perform specific technical or administrative functions.

(b) If the Contracting Officer designates a contracting officer's representative (COR), the Contractor will receive a copy of the written designation. It will specify the extent of the COR's authority to act on behalf of the contracting officer. The COR is not authorized to make any commitments or changes that will affect price, quality, quantity, delivery, or any other term or condition of the contract.

(End of clause)

252.203-7001 PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE-CONTRACT-RELATED FELONIES (MAR 1999)

(a) Definitions. As used in this clause—

(1) “Arising out of a contract with the DoD” means any act in connection with—

(i) Attempting to obtain;

(ii) Obtaining, or

(iii) Performing a contract or first-tier subcontract of any agency, department, or component of the Department of Defense (DoD).

(2) “Conviction of fraud or any other felony” means any conviction for fraud or a felony in violation of state or Federal criminal statutes, whether entered on a verdict or plea, including a plea of *nolo contendere*, for which sentence has been imposed.

(3) “Date of conviction” means the date judgment was entered against the individual.

(b) Any individual who is convicted after September 29, 1988, of fraud or any other felony arising out of a contract with the DoD is prohibited from serving--

(1) In a management or supervisory capacity on any DoD contract or first-tier subcontract;

(2) On the board of directors of any DoD contractor or first-tier subcontractor;

(3) As a consultant, agent, or representative for any DoD contractor or first-tier subcontractor; or

(4) In any other capacity with the authority to influence, advise, or control the decisions of any DoD contractor or subcontractor with regard to any DoD contract or first-tier subcontract.

(c) Unless waived, the prohibition in paragraph (b) of this clause applies for not less than 5 years from the date of conviction.

(d) 10 U.S.C. 2408 provides that a defense contractor or first-tier subcontractor shall be subject to a criminal penalty of not more than \$500,000 if convicted of knowingly—

(1) Employing a person under a prohibition specified in paragraph (b) of this clause; or

(2) Allowing such a person to serve on the board of directors of the contractor or first-tier subcontractor.

(e) In addition to the criminal penalties contained in 10 U.S.C. 2408, the Government may consider other available remedies, such as—

(1) Suspension or debarment;

(2) Cancellation of the contract at no cost to the Government; or

(3) Termination of the contract for default.

(f) The Contractor may submit written requests for waiver of the prohibition in paragraph (b) of this clause to the Contracting Officer. Requests shall clearly identify—

(1) The person involved;

(2) The nature of the conviction and resultant sentence or punishment imposed;

(3) The reasons for the requested waiver; and

(4) An explanation of why a waiver is in the interest of national security.

(g) The Contractor agrees to include the substance of this clause, appropriately modified to reflect the identity and relationship of the parties, in all first-tier subcontracts exceeding the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation, except those for commercial items or components.

(h) Pursuant to 10 U.S.C. 2408(c), defense contractors and subcontractors may obtain information as to whether a particular person has been convicted of fraud or any other felony arising out of a contract with the DoD by contacting The Office of Justice Programs, The Denial of Federal Benefits Office, U.S. Department of Justice, telephone (202) 616-3507.

(End of clause)

#### 252.204-7003 CONTROL OF GOVERNMENT PERSONNEL WORK PRODUCT (APR 1992)

The Contractor's procedures for protecting against unauthorized disclosure of information shall not require Department of Defense employees or members of the Armed Forces to relinquish control of their work products, whether classified or not, to the contractor.

(End of clause)

#### 252.204-7004 REQUIRED CENTRAL CONTRACTOR REGISTRATION.(MAR 2000)

(a) Definitions.

As used in this clause--

(1) Central Contractor Registration (CCR) database means the primary DoD repository for contractor information required for the conduct of business with DoD.

(2) Data Universal Numbering System (DUNS) number means the 9-digit number assigned by Dun and Bradstreet Information Services to identify unique business entities.

(3) Data Universal Numbering System +4 (DUNS+4) number means the DUNS number assigned by Dun and Bradstreet plus a 4-digit suffix that may be assigned by a parent (controlling) business concern. This 4-digit suffix may be assigned at the discretion of the parent business concern for such purposes as identifying subunits or affiliates of the parent business concern.

(4) Registered in the CCR database means that all mandatory information, including the DUNS number or the DUNS+4 number, if applicable, and the corresponding Commercial and Government Entity (CAGE) code, is in the

CCR database; the DUNS number and the CAGE code have been validated; and all edits have been successfully completed.

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee must be registered in the CCR database prior to award, during performance, and through final payment of any contract resulting from this solicitation, except for awards to foreign vendors for work to be performed outside the United States.

(2) The offeror shall provide its DUNS or, if applicable, its DUNS+4 number with its offer, which will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(3) Lack of registration in the CCR database will make an offeror ineligible for award.

(4) DoD has established a goal of registering an applicant in the CCR database within 48 hours after receipt of a complete and accurate application via the Internet. However, registration of an applicant submitting an application through a method other than the Internet may take up to 30 days. Therefore, offerors that are not registered should consider applying for registration immediately upon receipt of this solicitation.

(c) The Contractor is responsible for the accuracy and completeness of the data within the CCR, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to confirm on an annual basis that its information in the CCR database is accurate and complete.

(d) Offerors and contractors may obtain information on registration and annual confirmation requirements by calling 1-888-227-2423, or via the Internet at <http://www.ccr2000.com>.

(End of clause)

## 252.223-7004 DRUG-FREE WORK FORCE (SEP 1988)

### (a) Definitions.

(1) "Employee in a sensitive position," as used in this clause, means an employee who has been granted access to classified information; or employees in other positions that the Contractor determines involve national security; health or safety, or functions other than the foregoing requiring a high degree of trust and confidence.

(2) "Illegal drugs," as used in this clause, means controlled substances included in Schedules I and II, as defined by section 802(6) of title 21 of the United States Code, the possession of which is unlawful under chapter 13 of that Title. The term "illegal drugs" does not mean the use of a controlled substance pursuant to a valid prescription or other uses authorized by law.

(b) The Contractor agrees to institute and maintain a program for achieving the objective of a drug-free work force. While this clause defines criteria for such a program, contractors are encouraged to implement alternative approaches comparable to the criteria in paragraph (c) that are designed to achieve the objectives of this clause.

(c) Contractor programs shall include the following, or appropriate alternatives:

(1) Employee assistance programs emphasizing high level direction, education, counseling, rehabilitation, and coordination with available community resources;

(2) Supervisory training to assist in identifying and addressing illegal drug use by Contractor employees;

(3) Provision for self-referrals as well as supervisory referrals to treatment with maximum respect for individual confidentiality consistent with safety and security issues;

(4) Provision for identifying illegal drug users, including testing on a controlled and carefully monitored basis. Employee drug testing programs shall be established taking account of the following:

(i) The Contractor shall establish a program that provides for testing for the use of illegal drugs by employees in sensitive positions. The extent of and criteria for such testing shall be determined by the Contractor based on considerations that include the nature of the work being performed under the contract, the employee's duties, and efficient use of Contractor resources, and the risks to health, safety, or national security that could result from the failure of an employee adequately to discharge his or her position.

(ii) In addition, the Contractor may establish a program for employee drug testing--

(A) When there is a reasonable suspicion that an employee uses illegal drugs; or

(B) When an employee has been involved in an accident or unsafe practice;

(C) As part of or as a follow-up to counseling or rehabilitation for illegal drug use;

(D) As part of a voluntary employee drug testing program.

(iii) The Contractor may establish a program to test applicants for employment for illegal drug use.

(iv) For the purpose of administering this clause, testing for illegal drugs may be limited to those substances for which testing is prescribed by section 2.1 of subpart B of the "Mandatory Guidelines for Federal Workplace Drug Testing Programs" (53 FR 11980 (April 11, 1988), issued by the Department of Health and Human Services.

(d) Contractors shall adopt appropriate personnel procedures to deal with employees who are found to be using drugs illegally. Contractors shall not allow any employee to remain on duty or perform in a sensitive position who is found to use illegal drugs until such times as the Contractor, in accordance with procedures established by the Contractor, determines that the employee may perform in such a position.

(e) The provisions of this clause pertaining to drug testing program shall not apply to the extent that are inconsistent with state or local law, or with an existing collective bargaining agreement; provided that with respect to the latter, the Contractor agrees those issues that are in conflict will be a subject of negotiation at the next collective bargaining session.

(End of clause)

#### 252.223-7006 PROHIBITION ON STORAGE AND DISPOSAL OF TOXIC AND HAZARDOUS MATERIALS (APR 1993)

(a) "Definitions".

As used in this clause --

(1) "Storage" means a non-transitory, semi-permanent or permanent holding, placement, or leaving of material. It does not include a temporary accumulation of a limited quantity of a material used in or a waste generated or resulting from authorized activities, such as servicing, maintenance, or repair of Department of Defense (DoD) items, equipment, or facilities.

(2) "Toxic or hazardous materials" means:

(i) Materials referred to in section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 U.S.C. 9601(14)) and materials designated under section 102 of CERCLA (42 U.S.C. 9602) (40 CFR part 302);

(ii) Materials that are of an explosive, flammable, or pyrotechnic nature; or

(iii) Materials otherwise identified by the Secretary of Defense as specified in DoD regulations.

(b) In accordance with 10 U.S.C. 2692, the Contractor is prohibited from storing or disposing of non-DoD-owned toxic or hazardous materials on a DoD installation, except to the extent authorized by a statutory exception to 10 U.S.C. 2692 or as authorized by the Secretary of Defense or his designee.

(End of clause)

252.231-7000 SUPPLEMENTAL COST PRINCIPLES (DEC 1991)

When the allowability of costs under this contract is determined in accordance with part 31 of the Federal Acquisition Regulation (FAR), allowability shall also be determined in accordance with part 231 of the Defense FAR Supplement, in effect on the date of this contract.

252.243-7001 PRICING OF CONTRACT MODIFICATIONS (DEC 1991)

When costs are a factor in any price adjustment under this contract, the contract cost principles and procedures in FAR part 31 and DFARS part 231, in effect on the date of this contract, apply.

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## **SECTION J**

### **LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS**

#### **TABLE OF CONTENTS**

<b>ATTACHMENT</b>	<b>TITLE</b>
J1	CONTRACT DATA REQUIREMENTS LIST – DD FORM 1423
J2	INSTRUCTIONS FOR COMPLETING DD FORM 1423
J3	DRAWING INDEX AND DRAWINGS
J4	SUMMARY BORING LOGS
J5	SECTION C TECHNICAL SPECIFICATIONS

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<b>CONTRACT DATA REQUIREMENTS LIST</b>										<b>FORM APPROVED OMB No. 0704-0188</b>	
Public reporting burden for this collection of information is estimated to average 440 hours per response including the time for reviewing instructions, searching existing data gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect or any aspects of information including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government issuing Contracting Officer for the Contract/PR No. listed in Block 1.											
<b>A. Contract Line Item No.</b>				<b>B. Exhibit B</b>		<b>C. Category:</b> TPD _____ TM _____ OTHER _____		<b>Contract Data</b>			
<b>D. System/Item</b>						<b>E. Contract/PR No.</b>		<b>F: Contractor</b>			
1. Data Item No. <b>A001</b>		2. Title of Data Item <b>State of Washington driller License</b>						3. Subtitle			
4. Authority (Data Acquisition Document No.)				5. Contract Reference <b>SECTION 02211, para 1.4.1</b>				6. Requiring Office <b>A1</b>			
7. DD 250 REC		9. Dist. Statement Required		10. Frequency		12. Date of First Submission <b>14 DAC</b>		14. Distribution			
8. APP Code		11. As of Date <b>Award</b>		13. Date of Subsequent Submission		a. Addressee		Draft		b. Copies	
								Final		Reg      Repro	
16. Remarks						A1				3      0	
						15. Total ----->				3      0	
1. Data Item No. <b>A002</b>		2. Title of Data Item <b>Health and Safety Training and Respirator Fit Program</b>						3. Subtitle			
4. Authority (Data Acquisition Document No.)				5. Contract Reference <b>SECTION 02211, para 1.4.2</b>				6. Requiring Office <b>A1</b>			
7. DD 250 REC		9. Dist. Statement Required		10. Frequency		12. Date of First Submission <b>See Block 16</b>		14. Distribution			
8. APP Code		11. As of Date <b>DBD</b>		13. Date of Subsequent Submission		a. Addressee		Draft		b. Copies	
								Final		Reg      Repro	
16. Remarks						A1				3      0	
<b>Minimum of 14 days prior to start of site work.</b>											
						15. Total ----->				3      0	
1. Data Item No. <b>A003</b>		2. Title of Data Item <b>Accident Prevention Plan and Activity Hazard Analysis</b>						3. Subtitle			
4. Authority (Data Acquisition Document No.)				5. Contract Reference <b>SECTION 02211, para 1.4.3</b>				6. Requiring Office <b>A1</b>			
7. DD 250 REC		9. Dist. Statement Required		10. Frequency		12. Date of First Submission <b>See Block 16</b>		14. Distribution			
8. APP Code <b>A</b>		11. As of Date <b>DBD</b>		13. Date of Subsequent Submission		a. Addressee		Draft		b. Copies	
								Final		Reg      Repro	
16. REMARKS						A1				3      0	
<b>Minimum of 14 days prior to start of site work.</b>											
						15. Total ----->				3      0	
1. Data Item No. <b>A004</b>		2. Title of Data Item <b>Spill and Discharge Control Plan</b>						3. Subtitle			
4. Authority (Data Acquisition Document No.)				5. Contract Reference <b>SECTION 02211, para 1.4.4</b>				6. Requiring Office <b>A1</b>			
7. DD 250 REC		9. Dist. Statement Required		10. Frequency		12. Date of First Submission <b>See Block 16</b>		14. Distribution			
8. APP Code <b>A</b>		11. As of Date <b>DBD</b>		13. Date of Subsequent Submission		a. Addressee		Draft		b. Copies	
								Final		Reg      Repro	
16. Remarks						A1				3      0	
<b>Minimum of 14 days prior to start of site work.</b>											
						15. Total ----->				3      0	
<b>G. Prepared By</b>				<b>H. Date</b>		<b>I. Approve By</b>		<b>J. Date</b>			

**CONTRACT DATA REQUIREMENTS LIST****FORM APPROVED**  
**OMB No. 0704-0188**

Public reporting burden for this collection of information is estimated to average 440 hours per response including the time for reviewing instructions, searching existing data gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect or any aspects of information including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government issuing Contracting Officer for the Contract/PR No. listed in Block 1.

<b>A. Contract Line Item No.</b>				<b>B. Exhibit</b> B		<b>C. Category:</b> TPD _____ TM _____ OTHER _____			
<b>D. System/Item</b>				<b>E. Contract/PR No.</b>		<b>F: Contractor</b>			
1. Data Item No. A005		2. Title of Data Item Drilling Start Cards				3. Subtitle			
4. Authority (Data Acquisition Document No.)			5. Contract Reference SECTION 02211, para 1.4.5			6. Requiring Office A1			
7. DD 250 REC	9. Dist. Statement Required	10. Frequency OTIME	12. Date of First Submission See Block 16	14. Distribution					
8. APP Code		11. As of Date	13. Date of Subsequent Submission	a. Addressee	Draft	b. Copies			
						Final	Reg	Repro	
16. Remarks At beginning of work				A1		3	0		
				15. Total ----->		3	0		
1. Data Item No. A006		2. Title of Data Item Borehole Decommissioning Records				3. Subtitle			
4. Authority (Data Acquisition Document No.)			5. Contract Reference SECTION 02211, para 1.4.6			6. Requiring Office A1			
7. DD 250 REC	9. Dist. Statement Required	10. Frequency	12. Date of First Submission ASREQ	14. Distribution					
8. APP Code		11. As of Date	13. Date of Subsequent Submission	a. Addressee	Draft	b. Copies			
						Final	Reg	Repro	
16. Remarks				A1		3			
				15. Total ----->		3			
1. Data Item No. A007		2. Title of Data Item Driller's Log				3. Subtitle			
4. Authority (Data Acquisition Document No.)			5. Contract Reference SECTION 02211, para 1.4.7			6. Requiring Office A1			
7. DD 250 REC	9. Dist. Statement Required	10. Frequency	12. Date of First Submission See Block 16	14. Distribution					
8. APP Code		11. As of Date	13. Date of Subsequent Submission	a. Addressee	Draft	b. Copies			
						Final	Reg	Repro	
16. REMARKS At completion of each boring and well.				A1		3	0		
				15. Total ----->		3	0		
1. Data Item No. A008		2. Title of Data Item Tool Lubricant				3. Subtitle			
4. Authority (Data Acquisition Document No.)			5. Contract Reference SECTION 02211, para 1.4.8			6. Requiring Office A1			
7. DD 250 REC	9. Dist. Statement Required	10. Frequency OTIME	12. Date of First Submission See Block 16	14. Distribution					
8. APP Code A		11. As of Date	13. Date of Subsequent Submission	a. Addressee	Draft	b. Copies			
						Final	Reg	Repro	
16. Remarks Prior to commencing drilling.				A1		3	0		
				15. Total ----->		3	0		
<b>G. Prepared By</b>			<b>H. Date</b>		<b>I. Approve By</b>		<b>J. Date</b>		

Attachment J2

INSTRUCTIONS FOR COMPLETING DD FORM 1423

ADDRESS AND CODES

1. Where the following office symbol is shown in Block 14 the material shall be addressed as follows:

Symbol	Address
A1	ATTN: BILL GOSS/CENWS-PM-EM U.S. ARMY CORPS OF ENGINEERS SEATTLE DISTRICT PO BOX 3755 SEATTLE, WA 98124-3755

2. The codes used are defined as follows:

<u>Code</u>	<u>Block</u>	<u>Definition</u>
(1) OTIME	10	One time.
(2) XX	7	Inspection and acceptance requirements specified elsewhere in contract.
(3) A	8	Requires specific approval.
(4) ONE/R	10	One time plus revisions.
(5) DAC	12	Days after receipt of contract.
(6) DBD	13	Days before delivery.
(7) ASREQ	10,11,12	As required.
(8) MTHLY	10	Monthly.
(9) O	11	Submit on last day of the month.
(10) R/ASR	--	Revisions as required.
(11) CD	--	Calendar days

01022  
Sonic Drilling for Soil Borings and Monitoring Well Installation,  
Fort Lewis, Washington

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Attachment J3

DRAWING INDEX AND DRAWINGS

Sonic Drilling for Soil Borings and Monitoring Well Installation,  
Fort Lewis, Washington

SHEET REFERENCE	TITLE	REVISION NUMBER	DATE
Figure 1	General Site Location		--
Figure 2	Proposed Sonic Drilling Locations (EGDY)		--
Figure 3	Proposed Sonic Drilling Locations, Landfill 4 and Lower Aquifer		--

Drawings follow.

01022  
Sonic Drilling for Soil Borings and Monitoring Well Installation,  
Fort Lewis, Washington

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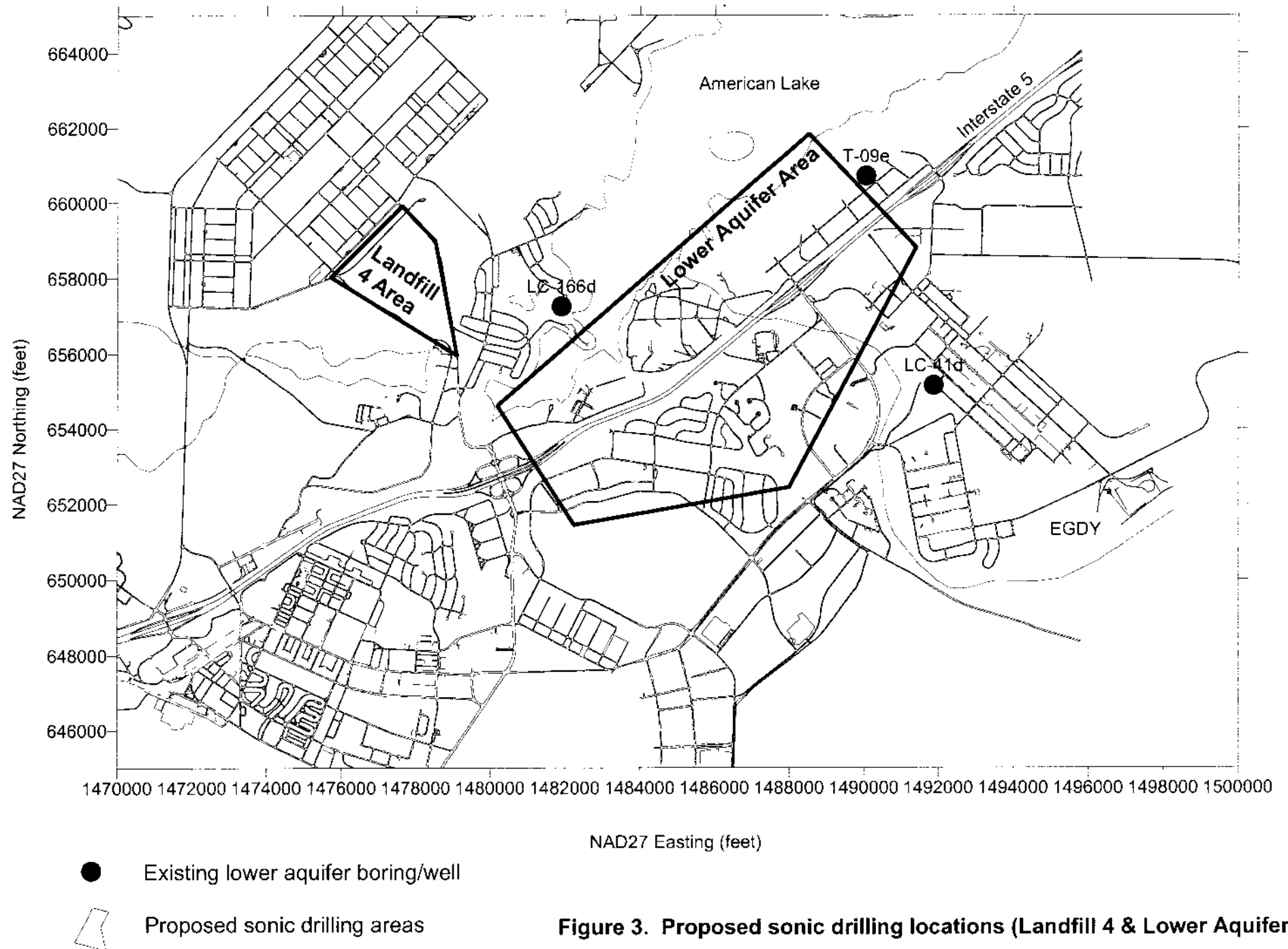




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**Figure 3. Proposed sonic drilling locations (Landfill 4 & Lower Aquifer)**

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01022  
Sonic Drilling for Soil Borings and Monitoring Well Installation,  
Fort Lewis, Washington

## Attachment J4

### SUMMARY BORING LOGS

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## Summary Log

Hole No. CC-137a

<b>DRILLING LOG</b>		<b>DIVISION</b> <u>North Pacific</u>	<b>INSTALLATION</b> <u>SEAKE DIST</u>	<b>SHEET</b> <u>1</u> <b>OF</b> <u>1</u> <b>SHEETS</b>
<b>1. PROJECT</b> <u>Fort Lewis Log Ctr.</u>			<b>10. SIZE AND TYPE OF BIT</b> <u>C" Hollow Stem Auger</u>	
<b>2. LOCATION (Coordinate or Station)</b> <u>N: 652684.6674 E: 1496167.9244</u>			<b>11. DATUM FOR ELEVATION SHOWN (TBM or BGS)</b> <u>NGVD 29</u>	
<b>3. DRILLING AGENCY</b> <u>Soil Sampling Service</u>			<b>12. MANUFACTURER'S DESIGNATION OF DRILL</b> <u>B-G1</u>	
<b>4. HOLE NO. (As shown on drawing title and file number)</b> <u>CC 137a</u>			<b>13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN</b> <u>5</u>	<b>UNDISTURBED</b> <u>0</u>
<b>5. NAME OF DRILLER</b> <u>GEORGE Jewell</u>			<b>14. TOTAL NUMBER CORE BOXES</b> <u>0</u>	
<b>6. DIRECTION OF HOLE</b> <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.			<b>15. ELEVATION GROUND WATER</b> <u>265.72</u>	
<b>7. THICKNESS OF OVERBURDEN</b> <u>N/A</u>			<b>16. DATE HOLE</b> <u>8/11/92</u> <b>STARTED</b> <u>8/20/92</u> <b>COMPLETED</b>	
<b>8. DEPTH DRILLED INTO ROCK</b> <u>N/A</u>			<b>17. ELEVATION TOP OF HOLE</b> <u>269.32</u>	
<b>9. TOTAL DEPTH OF HOLE</b> <u>45'</u>			<b>18. TOTAL CORE RECOVERY FOR BORING</b> <u>N/A</u>	
			<b>19. SIGNATURE OF INSPECTOR</b> <u>GARY BRANNON</u>	

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
			Well sorted gravel w/sand (Gw)			#1 3-5' GRA SAMPLE
	10					#2 5-10' GRA SAMPLE
	20					#3 DRILL SAMPLE - NO RECOVERY 10-15'
						#4 DRILL SAMPLE 15-20'
						#5 DRILL SAMPLE - NO RECOVERY 20-25'
	30		WHITE Tan to Black well graded sand w/ gravel (SW)			#6 DRILL SAMPLE 25-31'
			Coloring change estimated DUE to Drill action			DRILL SAMPLE - NO RECOVERY 31.5-35'
	40					#7 DRILL SAMPLE - NO RECOVERY 35-40'
			White, Tan, to Black poorly graded Sand w/ Gravel			#8 DRILL SAMPLE 40-45'
	50		T.D. 45'			
			NC			

DRILLING LOG		DIVISION		INSTALLATION		SHEET 1 OF 1 SHEETS	
1. PROJECT <b>FT. LEWIS Logistics Center</b>				10. SIZE AND TYPE OF BIT <b>7 1/8 tri-cone to TD</b>			
2. LOCATION (Coordinates or Station) <b>N: 652691.4561 E: 1496179.6606</b>				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) <b>NGVD 89</b>			
3. DRILLING AGENCY <b>Jensen Drilling Company</b>				12. MANUFACTURER'S DESIGNATION OF DRILL <b>Kochring Bredster 55-150 air rotary</b>			
4. HOLE NO. (As shown on drawing field and site number) <b>LC-137B</b>				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN <b>12</b>			
5. NAME OF DRILLER <b>Art Gwin</b>				14. TOTAL NUMBER CORE BOXES <b>0</b>			
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER <b>263.69</b>			
7. THICKNESS OF OVERBURDEN <b>NA</b>				16. DATE HOLE <b>10/20/92</b>			
8. DEPTH DRILLED INTO ROCK <b>NA</b>				17. ELEVATION TOP OF HOLE <b>289.05</b>			
9. TOTAL DEPTH OF HOLE <b>60'</b>				18. TOTAL CORE RECOVERY FOR BORING <b>NA</b>			
				19. SIGNATURE OF INSPECTOR <b>VM J. J. J.</b>			
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	
			med - dk bn to bk soil in POORLY GRADED GRAVEL			Sample #1, 5'	
			BASE OF SOIL DEVELOPMENT				
	10		VARIEGATED ROCKS in lt-med bn, gy-bn fines of volcanic, metamorphic and silicic rocks. Unit is med. dense, dry, POORLY GRADED GRAVEL w/ SAND; w/ SAND AND SILT.			Sample #2, 10'	
	20		STEILACDOM GRAVEL			Sample #3, 15'	
	30		BASE OF STEILACDOM			Sample #4, 20'	
	30		gy, bn, bk, wh, or, tn w/ lt-bn fines POORLY GRADED GRAVEL (SP, Gm) w/ SAND to SILTY GRAVEL w/ SAND. Unit is loose to sl. dense, moist to sl. WET			Sample #5, 25'	
	40		OUTWASH GRAVEL			Sample #6, 30'	
	50					Sample #7, 35'	
	50					Sample #8, 40'	
	50					Sample #9, 45'	
	50					Sample #10, 50'	
	50					Sample #11, 55'	
	50					Sample #12, 60'	
	60		gy, dk, or, tn, wh w/ lt-bn fines, POORLY GRADED SAND w/ GRAVEL (SP). Unit is loose, wet OUTWASH SAND				
	60		1E-bn w/ bk, gy, gn, wh rocks as POORLY GRADED SAND (SP) in sl. dense, moist Non-Glacial Sand Contains abundant wood fragments, and bronzed muscovite.				
	60						

DRILLING LOG		DIVISION	INSTALLATION	SHEET		
PROJECT		<u>North Pacific</u>	<u>Seattle District</u>	OF 2 SHEETS		
1. PROJECT		10. SIZE AND TYPE OF BIT <u>1 1/8" to TD</u>				
2. LOCATION (Coordinates or Station)		11. DAYUM FOR ELEVATION SHOWN (TBM - BSL)				
<u>N 65° 26' 48" E 149° 6' 19" S 0395</u>		<u>NGVD 29</u>				
3. DRILLING AGENCY		12. MANUFACTURER'S DESIGNATION OF DRILL				
<u>Jensen Drilling Co.</u>		<u>Kachina Spasstar 55-15 air rotary</u>				
4. HOLE NO. (As shown on drawing title and file number)		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED	UNDISTURBED	
<u>LC-137C</u>		25		25	0	
5. NAME OF DRILLER		14. TOTAL NUMBER CORE BOXES		0		
<u>Art Gwin</u>		15. ELEVATION GROUND WATER		263.31		
6. DIRECTION OF HOLE		16. DATE HOLE		STARTED	COMPLETED	
<input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED <input type="checkbox"/> OBS. FROM VERT.		10/25/92		10/26/92		
7. THICKNESS OF OVERBURDEN		17. ELEVATION TOP OF HOLE		289.19		
<u>NA</u>		18. TOTAL CORE RECOVERY FOR BORING		<u>NA</u>		
8. DEPTH DRILLED INTO ROCK		19. SIGNATURE OF INSPECTOR		<u>Jim Jaurate</u>		
<u>NA</u>						
9. TOTAL DEPTH OF HOLE		105'				
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	SCORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
						Sample #1, 5'
						Sample #2, 10'
						Sample #3, 15'
						Sample #4, 20'
						Sample #5, 25'
						Sample #6, 30'
						Sample #7, 35'
						Sample #8, 40'
						Sample #9, 45'
						Sample #10, 50'
						Sample #11, 55'
						Sample #12, 60'
						Contains muscovite and wood
						Sample #13, 65'
						Contains some granitic rocks
						Sample #14, 70'
						Sample #15, 75'
						Contains thin clay seams.
						Sample #16, 80'
						Sample #17, 85'
						Sample #18, 90'

## SUMMARY LOG

Hole No. LC-138

DRILLING LOG		DIVISION North Pacific		INSTALLATION Seattle District		SHEET OF 1 SHEETS	
1. PROJECT Ft. Lewis Logistics Center				10. SIZE AND TYPE OF BIT 4" H.S.C.			
2. LOCATION (Coordinates or Station) N: 152383.8838 E: 1496553.0296				11. DATUM FOR ELEVATION SHOWN (F.M. or M.S.) NGVD 29			
3. DRILLING AGENCY Soil Sampling Service				12. MANUFACTURER'S DESIGNATION OF DRILL Mobile R-61			
4. HOLE NO. (As shown on drawing title and file number) LC-138				13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN 6		DISTURBED 0	
5. NAME OF DRILLER George J. Willis				14. TOTAL NUMBER CORE BOXES 0		UNDISTURBED 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER 264.19		16. DATE HOLE STARTED 8/24/92 COMPLETED 8/24/92	
7. THICKNESS OF OVERBURDEN N/A				17. ELEVATION TOP OF HOLE 277.75		18. TOTAL CORE RECOVERY FOR BOXING N/A	
8. DEPTH DRILLED INTO ROCK N/A				19. SIGNATURE OF INSPECTOR Garry Brannon			
9. TOTAL DEPTH OF HOLE 32'							
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	SCORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
	0	0.0	Tan, Brown, green & black well graded gravel & sand (gw)  Tan, silty sand (s.m) (consol. s.l.s.) Moist, VEG. - / Trace of clay  T.D. 32			#1 LC-138	3-5'
	10	0.0				#2 LC-138	5-10
	20	0.0				#3 LC-138	13-15'
		0.0				#4 LC-138	18-20
		0.0				#5 LC-138	23-25
		0.0				#6 LC-138	30.5-32'
	40	0.0					
		0.0					
		0.0					
		0.0					
		0.0					
		0.0					
		0.0					
		0.0					
		0.0					
		0.0					
		0.0					
		0.0					
		0.0					

## SUMMARY LOG

Hole No. LC-139

DRILLING LOG		DIVISION NORTH PACIFIC		INSTALLATION SEATTLE DISTRICT		SHEET 1 OF 1 SHEETS	
1. PROJECT FL. Lewis Log Center				10. SIZE AND TYPE OF BIT 4" TO HSA			
2. LOCATION (Coordinates or Station) N: 652480.3449 E: 1496623.3964				11. DATUM FOR ELEVATION SHOWN (FSM or MSL) NGV929			
3. DRILLING AGENCY Soil Sampling Service Inc.				12. MANUFACTURER'S DESIGNATION OF DRILL MOBILE 361			
4. HOLE NO. (As shown on drawing title and file number) LC-139				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 7		UNDISTURBED 0	
5. NAME OF DRILLER GEORGE JEWELL				14. TOTAL NUMBER CORE BOXES 0			
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER 264.84 -11.6		16. DATE HOLE STARTED 8-12-92 COMPLETED 8-12-92	
7. THICKNESS OF OVERBURDEN NA				17. ELEVATION TOP OF HOLE 276.44			
8. DEPTH DRILLED INTO ROCK NA				18. TOTAL CORE RECOVERY FOR BORING N/A			
9. TOTAL DEPTH OF HOLE 35'				19. SIGNATURE OF INSPECTOR Robert E. Long Jr.			
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
	0		DARK BROWN, WELL GRADED GRAVEL (GW), loose, dry, subangular to subround, some dark brown to black silt, some cobbles			AUGER GRAD SAMPLES	
	10		soft silt layer			LC-139 S-1 3-5'	
	20		DARK BROWN, WELL GRADED GRAVEL (GW), loose, dry to moist, subangular, some dark brown silt and cobbles. (STEELACOOM GRAVEL)			LC-139 S-2 8-10'	
						LC-139 S-3 13-15'	
						LC-139 S-4 18-20'	
						LC-139 S-5 23-25'	
	30		GRAY, SANDY ELASTIC SILT (MH) DENSE, soft, med plasticity, WET, some sand (GLACIOFLACUSTRINE SILT)			LC-139 S-6 28-30'	
						LC-139 S-7 33-35'	
	40		Total Depth 35' 8-12-92			WATER LEVEL 8-18-92 8.53'	

## SUMMARY LOG

Hole No.

LC-145

DRILLING LOG		DIVISION		INSTALLATION		SHEET	
		North Pacific		Jewell District		1 OF 1 SHEETS	
1. PROJECT				10. SIZE AND TYPE OF BIT 4" HSA			
2. LOCATION (Coordinates or Station)				11. DATUM FOR ELEVATION SHOWN (TBM or MSL)			
N: 1651831.2445 E: 1497306.8058				NGVD 29			
3. DRILLING AGENCY				12. MANUFACTURER'S DESIGNATION OF DRILL			
Soil Sampling Service				MOBILE B-61 4" ID HSA			
4. HOLE NO. (As shown on drawing title and file number)				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		13. DISTURBED	
LC-145				10		UNDISTURBED	
5. NAME OF DRILLER				14. TOTAL NUMBER CORE BOXES			
George Jewell				15. ELEVATION GROUND WATER			
				265.66 - 141.86			
6. DIRECTION OF HOLE				16. DATE HOLE		16. COMPLETED	
<input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED				7-23-92		7-23-92	
7. THICKNESS OF OVERBURDEN				17. ELEVATION TOP OF HOLE			
NA				279.92			
8. DEPTH DRILLED INTO ROCK				18. TOTAL CORE RECOVERY FOR BORING			
NA				N/A			
9. TOTAL DEPTH OF HOLE				19. SIGNATURE OF INSPECTOR			
50'				RE. Long, Jr.			
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	
	0		DARK BROWN, WELL GRADED GRAVEL (GW), LOOSE, DRY		#1	CUTTINGS OBSERVED	
	10		SUB ANGULAR - ROUNDED, MEDIUM GRAVEL.		LC-145	SAMPLES NOT COLLECTED	
	20		APPROX GRADE CHANGE		LC-145 #2	REFER TO LC-145A FOR SAMPLES.	
	30		DARK BROWN, POORLY GRADED GRAVEL (GP), DRY, SUBANGULAR TO ROUNDED		LC-145 #3		
	40		DARK BROWN, POORLY GRADED GRAVEL WITH SILT AND SAND (DA) (NO SAMPLE)		LC-145 #4		
	50		COBBLES (DA) (NO SAMPLE)		LC-145 #5		
	60		LIGHT BROWN POORLY GRADED SAND WITH SILT, (SP-SM), SATURATED,		LC-145 #6		
	70		COARSE ANGULAR SAND, 0% SILT.		LC-145 #7		
	80				LC-145 #8		
	90				LC-145 #9		
	100				LC-145 #10		
	110		END of HOLE				
	120		50'				

## SUMMARY LOG

Hole No. LC-146

DRILLING LOG		DIVISION North Pacific		INSTALLATION SEATTLE DISTRICT		SHEET 1 OF 1 SHEETS	
1. PROJECT FT. LEWIS LOGISTICS CENTER				10. SIZE AND TYPE OF BIT 4" I.D. HSA			
2. LOCATION (Coordinates or Station) N: 1651898.3363 E: 1497408.2997				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) NGVD 29			
3. DRILLING AGENCY Soil Sampling Service				12. MANUFACTURER'S DESIGNATION OF DRILL MOBILE B61			
4. HOLE NO. (As shown on drawing title and file number) LC-146				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 8		DISTURBED 0	
5. NAME OF DRILLER GEORGE JEWELL				14. TOTAL NUMBER CORE BOXES 0		UNDISTURBED 0	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER 266.19		16. DATE HOLE STARTED 7-27-92 COMPLETED 7-27-92	
7. THICKNESS OF OVERBURDEN NA				17. ELEVATION TOP OF HOLE 277.59		18. TOTAL CORE RECOVERY FOR BORING N/A	
8. DEPTH DRILLED INTO ROCK NA				19. SIGNATURE OF INSPECTOR Robert Elroy Jr.			
9. TOTAL DEPTH OF HOLE 51							
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
			DARK BROWN, WELL GRADED GRAVEL (GW), LOOSE, DRY SUBANGULAR. (STELLACUM GRAVEL) BASE OF STELLACUM RAPID CHANGE IN GRADE			ESTIMATED SAMPLE INTERVAL	
	10					LC-146	S-1 3-5'
						LC-146	S-2 8-10'
						LC-146	S-3 13-15'
	20		DARK BROWN, POORLY GRADED GRAVEL (GP), LOOSE, MOIST, SUBANGULAR. (GLACIAL OUTWASH) GRAVEL			LC-146	S-4 18-20'
						LC-146	S-5 23-25'
	30					LC-146	S-6 28-30'
			APPROX CHANGE INSTANTLY			LC-146	S-7 33-35'
	40		~ 12' DISTINCT GRC CHANGE to LIGHT BROWN			LC-146	S-8 38-40'
			Drill action INDICATES: COMPACTED GRAVEL WITH SAND AND SILT, DENSE SOME COBBLES				NO SAMPLE
	50						NO SAMPLE
			TOTAL DEPTH 51'			WATER LEVELS: 7-28-92 8.2' 8-11-92 8.3'	

# SUMMARY LOG

Hole No. LC-150

DRILLING LOG		DIVISION		INSTALLATION		SHEET	
		North Pacific		SEATTLE DISTRICT		1 OF 1 SHEETS	
1. PROJECT Ft. Lewis LOGISTICS CENTER				10. SIZE AND TYPE OF BIT 1 1/2" I.D. HSA			
2. LOCATION (Coordinates or Station) N: 652559.0541 E: 1496626.1545				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) NGVD 29			
3. DRILLING AGENCY Soil Sampling Service				12. MANUFACTURER'S DESIGNATION OF DRILL MOBILE 861			
4. HOLE NO. (As shown on drawing title and file number) LC-150				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 8		UNDISTURBED 0	
5. NAME OF DRILLER George Jewell				14. TOTAL NUMBER CORE BOXES 0		15. ELEVATION GROUND WATER 264.96	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				16. DATE HOLE 5/24/92		COMPLETED 8/24/92	
7. THICKNESS OF OVERBURDEN NA				17. ELEVATION TOP OF HOLE 279.50 GS			
8. DEPTH DRILLED INTO ROCK NA				18. TOTAL CORE/RECOVERY FOR BORING N/A			
9. TOTAL DEPTH OF HOLE 37'				19. SIGNATURE OF INSPECTOR Gary Branner			
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	1 CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
	0		Tan Brown Gravel to Black well graded gravel w/ sand (Gw)			#1 Grab sample 3-5'	
	10					#2 Grab sample 8-10'	
	20					#3 Grab sample 12-15'	
	20					#4 Drive sample 15-18.5'	
	30		Green Brown to Black well graded sand w/ gravel (Sw) coarse, wet			#5 Drive sample 23-24'	
	30					#6 Drive sample 27-28.5' no recovery	
	30					#7 Drive sample 33-33.5' no recovery	
	30		Silty Sand (SM)			#8 Drive sample 30-32'	
	40		T.O. 37'				
	50						
	60						
	70						
	80						
	90						



DIVISION <b>NORTH PACIFIC</b>		INSTALLATION <b>SEATTLE DISTRICT</b>		SHEET OF 1 SHEETS
1. PROJECT <b>FL Lewis log CTR</b>		10. SIZE AND TYPE OF BIT <b>15 5/8 - 11 5/8 TORQUEBIT</b>		Aie Roney
2. LOCATION (Coordinates of Station) <b>N: 652513.7448 E: 1496647.3649</b>		11. DATUM FOR ELEVATION SHOWN (BSN or MSL) <b>NAVD 29</b>		
3. DRILLING AGENCY <b>JENSEN Drilling Company</b>		12. MANUFACTURER'S DESIGNATION OF DRILL <b>KOPFING SPEED STAR 5515 II</b>		
4. HOLE NO. (As shown on drawing title and file number) <b>LC-153</b>		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN <b>8</b>		UNDISTURBED <b>✓</b>
5. NAME OF DRILLER <b>ART GWIN</b>		14. TOTAL NUMBER CORE BOXES <b>✓</b>		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER <b>264.89</b> <b>15 5'</b>		
7. THICKNESS OF OVERBURDEN <b>NA</b>		16. DATE HOLE STARTED <b>8-18-92</b> COMPLETED <b>8-18-92</b>		
8. DEPTH DRILLED INTO ROCK <b>NA</b>		17. ELEVATION TOP OF HOLE <b>278.46</b>		
9. TOTAL DEPTH OF HOLE <b>37.5'</b>		18. TOTAL CORE RECOVERY FOR BORING <b>NA</b>		
		19. SIGNATURE OF INSPECTOR <b>Robert E. Long Jr.</b>		

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
						GRAB sample FROM CYCLONE
			BROWN, POORLY GRADED GRAVEL (GP) LOOSE, MED. DENSE, MOIST to WET. SUB ANGULAR. GRAVEL 1-2" in Ø size, broken angular fragments due to bit action. some sand silt and cobbles (STELLACOOM GRAVEL)			LC-153 S-1 5'-6'
						8' GWT WATER
						LC-153 S-2 10-11'
						LC-153 S-3 15-16'
			LIGHT BROWN to LIGHT GRAY, POORLY GRADED GRAVEL (GP), MED. DENSE WET, SUBANGULAR, SAND, SILT and CLAY (KASHON? LIL?)			LC-153 S-4 20-21'
			LIGHT BROWN to GRAY BROWN, POORLY GRADED GRAVEL w/ SAND (GP), MED. DENSE, SAND IS COARSE, (OUTWASH GRAVEL)			LC-153 S-5 25-26'
						LC-153 S-6 30-31'
			GRADING TO A fill-like SILTY SANDS GRAVEL.			LC-153 S-7 35-36'
			DARK GRAY, SILTY GRAVEL (GM)			LC-153 S-8 37-37.5'
			CASING TOTAL DEPTH 37.5'			
			DRILLED 38.0'			

DRILLING LOG		DIVISION NORTH PACIFIC		INSTALLATION SEATTLE DISTRICT		SHEET 1 OF 1 SHEETS	
1. PROJECT FT. LEWIS LOGISTICS CENTER				10. SIZE AND TYPE OF BIT 6" ID. H.S.A.			
2. LOCATION (Coordinates or Station) N: 652399.7908 E: 1496509.7550				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) NGVD 29			
3. DRILLING AGENCY SOIL SAMPLING SERVICE				12. MANUFACTURER'S DESIGNATION OF DRILL MOBILE B-61			
4. HOLE NO. (As shown on drawing title and file number) LC-155				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 10		UNDISTURBED 0	
5. NAME OF DRILLER GEORGE JEWELL				14. TOTAL NUMBER CORE BOXES 0			
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER 264.44		16. DATE HOLE STARTED 9/30/92 COMPLETED 9/30/92	
7. THICKNESS OF OVERBURDEN N/A				17. ELEVATION TOP OF HOLE 272.16			
8. DEPTH DRILLED INTO ROCK N/A				18. TOTAL CORE RECOVERY FOR BORING NA			
9. TOTAL DEPTH OF HOLE 48 FEET				19. SIGNATURE OF INSPECTOR Roy D. Deen			
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	
	0.00	0.00	(GM) OLIVE BRN, DRY, FINE	100		STARTED DRILLING ABOUT 1045 HRS. ON 9/30/92	
	0.00	0.00	NON-PLASTIC, MEDIUM TO FINE SAND, WELL SORTED, POORLY GRADED, GRAVELS	100		#GS-1, LC-155, 3'-5' GRAB SAMPLE	
	0.00	0.00	WELL GRADED, POORLY SORTED, COBBLES, PEBBLES	100		#GS-2, LC-155, 8'-10' GRAB SAMPLE	
	0.00	0.00	(GW) LOST FINE, DRY, COBBLES LARGER AND MORE OF THEM.	100		#GS-3, LC-155, 13'-15' GRAB SAMPLE	
	0.00	0.00	LL COBBLES 10%, COBBLES 50%, PEBBLES 40%	100		WATER LEVEL IN HOLE.	
	0.00	0.00	(GW) AS ABOVE, EXCEPT HIGHER PERCENTAGE LG. COBBLES.	100		#DS-4, LC-155, 18'-19' SPT = 14 BLOWS FOR 6"	
	0.00	0.00	10% COBBLES, 20% COBBLES 40%, PEBBLES 40%, NO FINES, DRY	100		50 " " 2"	
	0.00	0.00	WELL SORTED SAND WITH FINE SAND	100		#DS-5, LC-155, 23'-25' SPT = 37 BLOWS FOR 6"	
	0.00	0.00	FINES, COARSE TO MEDIUM SAND AND GRAVEL WITH FINES, WET.	100		50 " " 2"	
	0.00	0.00	WELL GRADED, POORLY SORTED	100		#DS-6, LC-155, 28'-29' SPT = 10 BLOWS FOR 6"	
	0.00	0.00	(GW) POORLY SORTED GRAVEL, WET, COBBLES, PEBBLES, FINE GRAVEL	100		50 " " 2"	
	0.00	0.00	WELL GRADED, COARSE TO FINE	100		* ESTIMATED AQUIFER DEPTH	
	0.00	0.00	WELL SORTED SAND, NON-PLASTIC FINES	100		DS-7, LC-155, 33'-34' SPT = 50 BLOWS FOR 5"	
	0.00	0.00	(SP) POORLY SORTED SAND, GRAVEL	100		DS-8, LC-155, 38'-39' SPT = 50 BLOWS FOR 4 1/2"	
	0.00	0.00	SAND COARSE TO MEDIUM, GRAVEL FINE WITH SOME COBBLES. FINE	100		NO RECOVERY	
	0.00	0.00	NON-PLASTIC, 60% SAND, WET	100		DRILL ACTION INDICATES WENT INTO MUCH DENSER MATERIAL	
	0.00	0.00	(SP) 30% GRAVEL, 70% SAND NO FINES (PROBABLY WASHED OUT)	100		#DS-9, LC-155, 44'-45' SPT = 50 BLOWS FOR 6"	
	0.00	0.00	SAND, GRAVEL GAP-GRADED, POORLY SORTED, WET.	100		#DS-10, LC-155, 47'-47.5' SPT = 35 BLOWS FOR 4"	
	0.00	0.00	(GP) COARSE GRAVELS, POORLY GRADED, WELL SORTED, NO FINES (MAY HAVE BEEN WASHED OUT). WET.	100		46'-47' INTERVAL HAD ROUGHER DRILLING ACTION, FELT LIKE WENT THROUGH MORE COBBLES THAN PREVIOUS INTERVAL	
	0.00	0.00	(SW-SM) DENSE BAN GRAVEL, WET, SAND, SILT, FINES NON-PLASTIC	100		* ESTIMATED AQUIFER DEPTH BASED ON DRILLING ACTION.	
	0.00	0.00	MOORE COBBLES (GP) WET.	100		WELL - COMPLETION DATA.	
	0.00	0.00	(SP-SM) WET.	100		20 FT. SCREEN	
	0.00	0.00	T.D. AT 48' ON 9/30/92	100		28'-48'	
	0.00	0.00	47'-48' INTERVAL DESCRIPTION, VERY VERY DENSE, BASED ON DRILLING ACTION. (SP-SM)	100		10-20 SAND	
	0.00	0.00	BOTTOM 1/3 OF SAMPLE VERY POORLY SORTED SAND WITH SOME PEBBLES AND SILT.	100		25' - 48'	
	0.00	0.00	SAND GAP-GRADED, SAMPLE WET, TOP 2/3 OF SAMPLE WELL-SORTED SAND BUT THIS MAY ALL BE SLUFF.	100		FINE SAND	
	0.00	0.00		100		23' - 25'	
	0.00	0.00		100		ENVIROGROUT	
	0.00	0.00		100		4' - 23'	
	0.00	0.00		100		BENTONITE CHIPS	
	0.00	0.00		100		3' - 4'	
	0.00	0.00		100		CONCRETE MONUMENT	
	0.00	0.00		100		GL-3'	

SUMMARY LOG  
MONITORING WELL

Hole No. LC-156

<b>DRILLING LOG</b>		<b>DIVISION</b> North Pacific	<b>INSTALLATION</b> Seattle District	<b>SHEET</b> 1 OF 1 SHEETS
<b>1. PROJECT</b> FL. LEWIS Logistics Center		<b>10. SIZE AND TYPE OF BIT</b> 1 1/4" to 20" 9/8" to 10"		
<b>2. LOCATION (Coordinates of Station)</b> N: 652357.0569 E: 1496547.0806		<b>11. DATUM FOR ELEVATION SHOWN (FSM = MSL)</b> NGVD 29		
<b>3. DRILLING AGENCY</b> Jensen Drilling Company		<b>12. MANUFACTURER'S DESIGNATION OF DRILL</b> Kochling Woodstar SS-15 III air rotary		
<b>4. HOLE NO. (As shown on drawings title and site number)</b> LC-156		<b>13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN</b> 8		
<b>5. NAME OF DRILLER</b> Art Gwin		<b>14. TOTAL NUMBER CORE BOXES</b> 0		
<b>6. DIRECTION OF HOLE</b> <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		<b>15. ELEVATION GROUND WATER</b> 266.65		
<b>7. THICKNESS OF OVERBURDEN</b> NA		<b>16. DATE HOLE</b> STARTED 10/1/92 COMPLETED 8/31/92		
<b>8. DEPTH DRILLED INTO ROCK</b> NA		<b>17. ELEVATION TOP OF HOLE</b> 276.60		
<b>9. TOTAL DEPTH OF HOLE</b> 402		<b>18. TOTAL CORE RECOVERY FOR BORING</b> NA		
		<b>19. SIGNATURE OF INSPECTOR</b> [Signature]		

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	10		lt-bn, gy-bn, variegated, poorly GRADED GRAVEL w/ SILT and SAND (GP-GM), loose, dry, sub-ang to sub-round, fine to med grnd			Sample #1 difficult drilling
	20		med bn, variegated rock in SILTY GRAVEL w/ SAND (GM), dense, moist, f-m grnd <u>TILL</u>			Sample #2 (1st sieve sample)
	30		lt-med bn, gy-bn, variegated rocks, POORLY GRADED GRAVEL w/ SILT (GP-GM) grading into POORLY GRADED GRAVEL w/ SAND (GP), med. dense, sl. wet, f-m grnd, Till like OUTWASH GRAVEL			Sample #3
	40		med bn, gy-bn, variegated rocks, in SILTY/CLAYEY GRAVEL w/ SAND (GM/GC) that grades downward into POORLY GRADED GRAVEL w/ SILT & SAND (GP-GM) then into PGG. w/ SAND (GP) in a loose, moist, f-med grained <u>TILL</u>			Sample #4 } very till-like Sample #5 } gravels.
						Sample #6
						Sample #7
						Sample #8
						Total length casing is 40' 1/2", 39' 5" in ground

DRILLING LOG		DIVISION <i>North Pacific</i>		INSTALLATION <i>Seattle District</i>		SHEET / OF / SHEETS	
1. PROJECT <i>U.S. LEWIS Logistics Center</i>				10. SIZE AND TYPE OF BIT <i>12" HSA Auger</i>			
2. LOCATION (Coordinates or Station) <i>N: 652492.4140 E: 1496560.7566</i>				11. DATUM FOR ELEVATION SHOWN (FSM or MSL) <i>NGVD 29</i>			
3. DRILLING AGENCY <i>Soil Sampling</i>				12. MANUFACTURER'S DESIGNATION OF DRILL <i>B-61 Mobile Drill - HSA</i>			
4. HOLE NO. (As shown on drawing HDS and HDS number) <i>LC-158</i>				13. TOTAL "O. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED <i>7</i>	
5. NAME OF DRILLER <i>George Jewell</i>				14. TOTAL NUMBER CORE BOXES <i>0</i>		UNDISTURBED <i>0</i>	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER <i>265.22</i>		16. DATE HOLE STARTED <i>11/04/92</i> COMPLETED <i>11/04/92</i>	
7. THICKNESS OF OVERBURDEN <i>NA</i>				17. ELEVATION TOP OF HOLE <i>276.24</i>		18. TOTAL CORE RECOVERY FOR BORING <i>NA</i>	
8. DEPTH DRILLED INTO ROCK <i>NA</i>				19. SIGNATURE OF INSPECTOR <i>[Signature]</i>			
9. TOTAL DEPTH OF HOLE <i>33</i>							
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
	10		94. bk, bn, w/ 1E-med bn fines POORLY GRADED GRAVEL (GP). LOOSE, DRY, DIFFICULT DRILLING STEILACOOM GRAVEL			Sample #1, 5'	
	20		BASG: STEILACOOM			Sample #2, 10'	
	25					Sample #3, 15'	
	30		94. gn-gy, 1E-bn w/ 1E-bn fines in POORLY GRADED GRAVEL w/ SILT and SAND (GP-GM) (fine) is LOOSE & SI. DENSE, moist, CLAYEY GRAVEL			Sample #4, 20'	
			bl-gy sandy silt, till			Sample #5, 28'	
						Sample #6, 32.5'	
T.D. HOLE							

<b>DRILLING LOG</b>		<b>DIVISION</b> North Pacific	<b>INSTALLATION</b> Seattle District	<b>SHEET 1</b> OF 1 SHEETS
<b>1. PROJECT</b> FL. LEWIS Logistics Center		<b>10. SIZE AND TYPE OF BIT</b> 7 1/8" Tricone to TD.		
<b>2. LOCATION (Coordinates or Station)</b> N: 652434.5241 E: 1496210.2644		<b>11. DATUM FOR ELEVATION SHOWN (TBM or MSL)</b> NGVD of 1929		
<b>3. DRILLING AGENCY</b> Jensen Drilling Company		<b>12. MANUFACTURER'S DESIGNATION OF DRILL</b> Kiehlring Speedstar SS-15 III air rotary		
<b>4. HOLE NO. (As shown on drawing title and file number)</b> LC-160		<b>13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN</b> DISTURBED 17 UNDISTURBED 0		
<b>5. NAME OF DRILLER</b> Art Gwin		<b>14. TOTAL NUMBER CORE BOXES</b> N/A		
<b>6. DIRECTION OF HOLE</b> <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		<b>15. ELEVATION GROUND WATER</b> 265.21		
<b>7. THICKNESS OF OVERBURDEN</b> N/A		<b>16. DATE HOLE</b> STARTED 4/1/93 COMPLETED 4/1/93		
<b>8. DEPTH DRILLED INTO ROCK</b> N/A		<b>17. ELEVATION TOP OF HOLE</b> 276.58		
<b>9. TOTAL DEPTH OF HOLE</b> 85		<b>18. TOTAL CORE RECOVERY FOR BORING</b> N/A		
		<b>19. SIGNATURE OF INSPECTOR</b> JH Haurote		

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	10		med bn, bk, gy. to POORLY GRADED GRAVEL w/ SAND (GP-Gm), LOOSE, DRY			Sample #1, 5'
			STELLACOOM GRAVEL			Sample #2, 10'
	20					Sample #3, 15'
			gy & lt gy w/ variegated rocks in WELL GRADED GRAVEL w/ CLAY (GW-GC), DENSE, moist			Sample #4, 20'
	30		TILL			Sample #5, 25'
			POORLY GRADED			Sample #6, 30'
	40		16-med bn, varieg. rocks in WELL GRADED GRAVEL w/ SAND, LOOSE, WET to V. WET			Sample #7, 35'
			OUTWASH GRAVEL			Sample #8, 40'
			POSS. TILL: compact silty sand w/ gravel mat. DENSE (SM)			Sample #9, 45'
	50		16 bn to gy-bn WELL GRADED GRAVEL (GW), LOOSE, V. WET			Sample #10, 50'
			thin sand stringers through this zone			Sample #11, 55'
	60		OUTWASH GRAVEL			Sample #12, 60'
			16 to med bn, gy-bn POORLY GRADED GRAVEL w/ SAND (GP-Gm), LOOSE, WET to V. WET			Sample #13, 65'
	70		POOR GRAVEL OUTWASH GRAVEL			Sample #14, 70'
			color changes to gy, bn-gy, and grain size increases, lg grains now at 1/4 to 2"			Sample #15, 75'
	80					Sample #16, 80'
	85		16 bn, silty sand w/ GRAVEL (SM) LOOSE, SOFT, moist to ST. WET			Sample #17, 85'
T.D.			UN-GLACIAL SAND			70' CASING = 90' IN GROUND = 87' STICK-UP = 3' SET SCREEN BOTTOM @ 85'

# MONITORING WELL INSTALLATION DETAILS

PROJECT: FORT LEWIS LOGISTICS CENTER

WELL NO. ~~MW01-9809~~ LC-161

WELL LOCATION: EGDY AREA

DATE COMPLETED: 7/2/93

TOTAL DEPTH: 34'

DRAWING NOT TO SCALE

**NOTE:**

DEPTHS listed are from ground level.  
ELEVATIONS listed are from mean sea level.

TOP OF PAD ELEVATION - 280.36

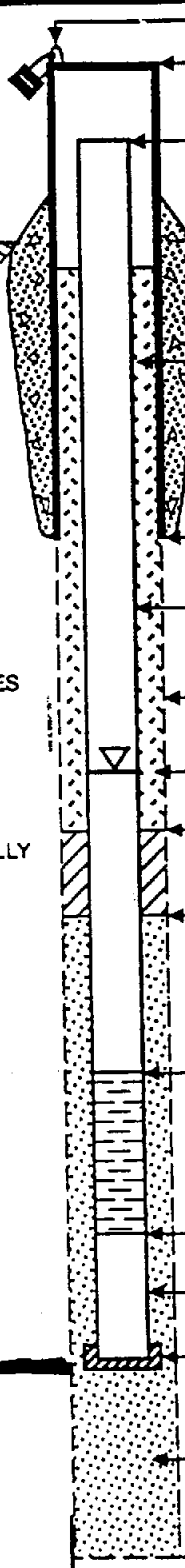
GENERALIZED STRATIGRAPHY AND WATER LEVEL

2' - SILTY SANDY GRAVEL AND GRAVELLY SAND

7' - SANDY GRAVEL WITH SOME COBBLES

12' - SANDY GRAVELLY COBBLES

34' - SILT



Locking Cap

Height of top of surface casing above ground surface: 2.5 ft.

Elevation of top of riser pipe: 282.62 ft.

Height of top of riser pipe above ground surface: 2 ft.

Type of surface seal: CONCRETE

Depth to top of annular seal: 2 ft.

Type of annular seal: BENTONITE VOLCLAY GROUT

I.D. of surface casing: 10"

Type of surface casing: STEEL LOCKING A.G. MONUMENT

Depth of surface casing below ground: 3 ft.

I.D. of riser pipe: 4"

Type of riser pipe: SCH 40 PVC

Diameter of borehole: 9"

Depth to groundwater below ground surface: 11.05 ft.

Elevation of groundwater surface: 269.31 ft.

Depth to top of seal: 17 ft.

Type of seal: BENTONITE

Type of sand pack: 10/20 SILICA

Depth of top of sand pack: 19 ft.

Depth to top of screened section: 23.5 ft.

Type of screened section: PVC SCH 40

Describe openings: .020 MACHINE - SLOTTED

I.D. of screened section: 4"

Length of screen: 10 ft.

Depth to bottom of screened section: 33.5 ft.

Length of blank section: 0.5 ft.

Depth to bottom of plugged blank: 34 ft.

Type of backfill:

Depth of hole below ground surface: 34 ft.

# MONITORING WELL INSTALLATION DETAILS

PROJECT: FORT LEWIS LOGISTICS CENTER

WELL NO. ~~MW-02~~ LC-162

WELL LOCATION: EGDY AREA

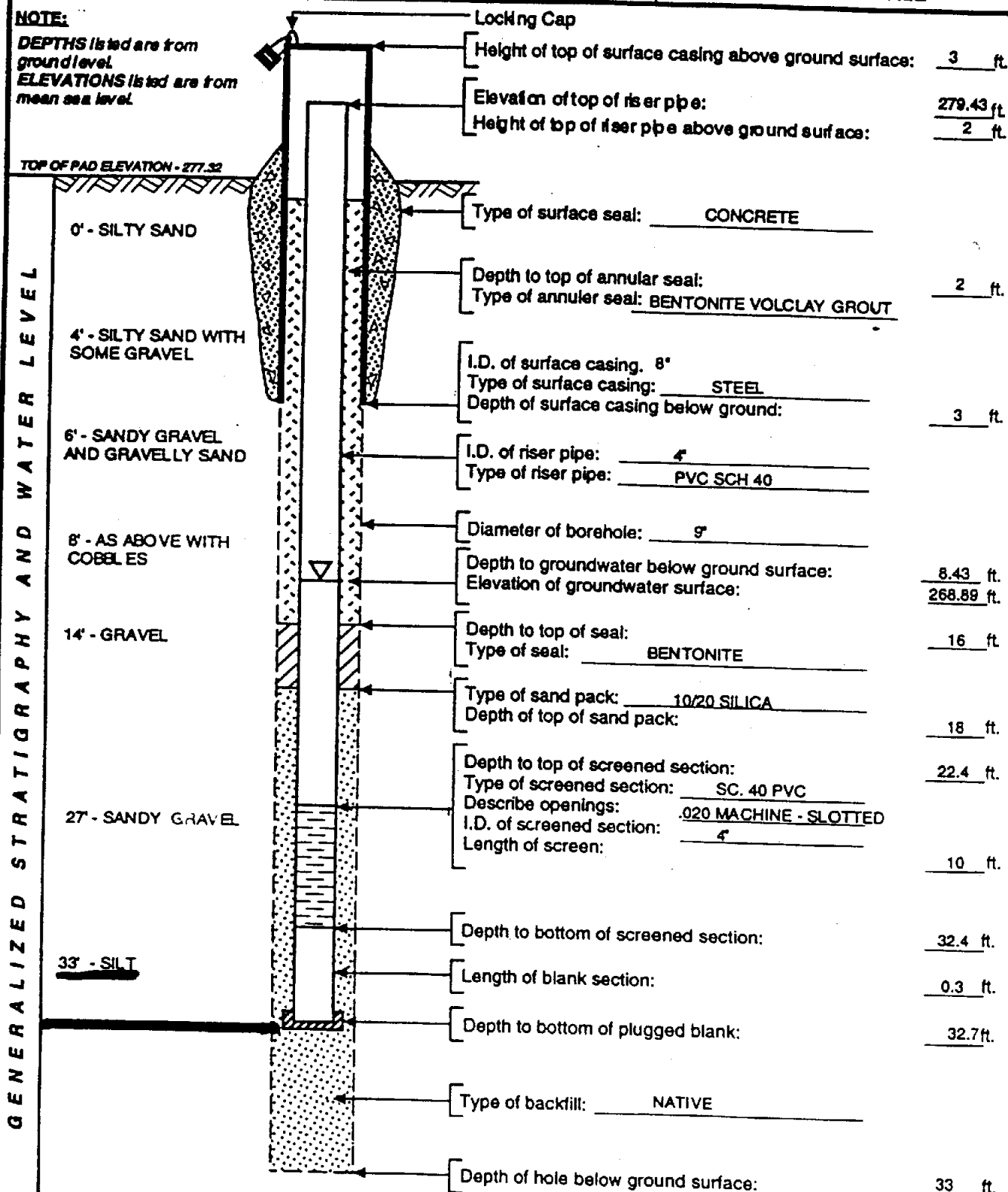
DATE COMPLETED: 7/3/93

TOTAL DEPTH: 33'

DRAWING NOT TO SCALE

**NOTE:**

DEPTHS listed are from ground level.  
ELEVATIONS listed are from mean sea level.



DRILLING LOG		DIVISION		INSTALLATION		SHEET	
PROJECT Ft. LEWIS Logistics Center		N.P.D.		Seattle District		SHEET 1 OF 2 SHEETS	
LOCATION (Coordinates or Station) N. 651808.2281 E. 497288.4944				NO. SIZE AND TYPE OF BIT 1 1/4 to 1 1/8" 11V8 & TD			
DRILLING AGENCY Tensen Drilling Company				NGVD 29			
HOLE NO. (As shown on drawing title and site number) LR-1				12. MANUFACTURER'S DESIGNATION OF DRILL Kochring Speedstar 3515 III air rotary			
				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 22		UNOBTAINED 0	
NAME OF DRILLER Art Gwin				14. TOTAL NUMBER CORE BOXES 0			
DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER 16.50 FROM G.S.			
THICKNESS OF OVERBURDEN N/A				16. DATE HOLE STARTED 8/19/92 COMPLETED 8/24/92			
DEPTH DRILLED INTO ROCK N/A				17. ELEVATION TOP OF HOLE 281.73			
TOTAL DEPTH OF HOLE 110E				18. TOTAL CORE RECOVERY FOR BORING 0			
				19. SIGNATURE OF INSPECTOR M. J. Mouton			
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
	10		gy-bn, variegated POORLY GRADED GRAVEL w/ SILT AND SAND (GP-GM) med. dense, dry, f. med grained STELLACOM GRAVEL			Sample #1	
			BASE OF STELLACOM GRAVEL			Sample #2	
	20		16-b med. bn, variegated gravels in POORLY GRADED GRAVEL w/ SAND, w/ SAND and SILT (GP, GP-GM). Is med. dense, moist to sl. WET, fine to med. grained TILL			Sample #3	
	30					Sample #4	
	40		16-b to gy-ba overall, gy, bk, wh, f. rock in POORLY GRADED GRAVEL w/ SILT & SAND, w/ SAND (GP-GM, GP) med. dense, med. wet f. med. grained OUTWASH GRAVEL			Sample #5	
	50		med bn, gy-bn overall, variegated gravels in POORLY GRADED GRAVEL (GP) and POORLY GRADED GRAVEL w/ CLAY (SS) [GP-GC] Unit is dense, moist, fine to med grained TILL			Sample #6	
	60		16 gy-bn, variegated rocks in WELL GRADED SAND w/ SILT and GRAVEL, dense, v. wet, f. coarse grained OUTWASH SAND			Sample #7 (1st sieve sample)	
	70		med. bn, variegated rocks, POORLY GRADED w/ SILT, locally w/ SAND also (GP-GM). Unit is sl.-med dense, moist, f. med grnd. TILL			Sample #8	
	80		v. st. sand, muscovite, Non-glacial?			Sample #9	
	90		16-med bn fines, gy, bk, wh, Tan, or, bn rocks in WELL GRADED SAND w/ GRAVEL, then w/ GRAVEL and SILT (SW, SW-SM). Is v. dense, v. wet, v. f. coarse grained OUTWASH SAND			Sample #10	
			gradational change to gravel dominant			Sample #11	
			16-gy-bn variegated rocks in			Sample #12	



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DRILLING LOG		DIVISION N.P.D.		Hole No. <u>LA-1</u>		
1. PROJECT <u>FL. LEWIS Logistics Center</u>		INSTALLATION <u>Seattle District</u>		SHEET <u>2</u> OF <u>2</u> SHEETS		
2. LOCATION (Coordinates or Station) <u>N. 651808.2281 E. 1497288.4944</u>		10. SIZE AND TYPE OF BIT <u>14 3/4 to 16 1/2 7/8 to 7D</u>		11. DATUM FOR ELEVATION KNOWN (TBM or MSL) <u>NGVD 29</u>		
3. DRILLING AGENCY <u>Jensen Drilling Company</u>		12. MANUFACTURER'S DESIGNATION OF DRILL <u>Koching Sandstar SS15 III air rotary</u>		13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN <u>22</u>		
4. HOLE NO. (As shown on drawing title and file number) <u>LA-1</u>		14. TOTAL NUMBER CORE BOXES <u>0</u>		15. ELEVATION GROUND WATER <u>16.50 FROM G.S.</u>		
5. NAME OF DRILLER <u>Art Gwin</u>		16. DATE HOLE STARTED <u>8/19/94</u> COMPLETED <u>8/24/94</u>		17. ELEVATION TOP OF HOLE <u>281.73</u>		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		18. TOTAL CORE RECOVERY FOR BORING <u>0</u>		19. SIGNATURE OF INSPECTOR <u>Amgaurte</u>		
7. THICKNESS OF OVERBURDEN <u>N/A</u>		19. SIGNATURE OF INSPECTOR				
8. DEPTH DRILLED INTO ROCK <u>N/A</u>						
9. TOTAL DEPTH OF HOLE <u>110.5</u>						
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	100		POORLY GRADED GRAVEL w/ SAND (GP). V. DENSE, V. WET, F. MED GRAD			Sample # 20
			OUTWASH GRAVEL			Sample # 21
			GRADES BACK INTO SAND			Sample # 22
	110		DOMINANT OUTWASH SAND			12" casing driven to 110.8 feet
		T.D.	dk bn to gy-bn, variegated gravels and sands in POORLY GRADED GRAVEL w/ CLAY and SAND (GP-GC). Unit is sl-med dense, moist to WET until clays are encountered, f-med grained			
			<u>HITZAP</u>			

DRILLING LOG		DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS		
1. PROJECT <b>FL. LEWIS Logistics Center</b>		<b>N.P.D.</b>	<b>Seattle District</b>	10. SIZE AND TYPE OF BIT <b>14 3/4 to 23 1/2 1/2 in. cone</b>		
2. LOCATION (Coordinate or Station) <b>N. 651987.6638 E. 1497528.4325</b>				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) <b>NGVD 29</b>		
3. DRILLING AGENCY <b>Jensen Drilling Company</b>				12. MANUFACTURER'S DESIGNATION OF DRILL <b>Karlina Roadster 5515W air rotary</b>		
4. HOLE NO. (As shown on drawing title and file number) <b>LR-2</b>				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN <b>21</b>	UNDISTURBED <b>0</b>	
5. NAME OF DRILLER <b>Art Gwin</b>				14. TOTAL NUMBER CORE BOXES <b>0</b>		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER <b>12.62</b>		
7. THICKNESS OF OVERBURDEN <b>N/A</b>				16. DATE HOLE STARTED <b>8/24/92</b> COMPLETED <b>8/26/92</b>		
8. DEPTH DRILLED INTO ROCK <b>N/A</b>				17. ELEVATION TOP OF HOLE <b>277.96</b>		
9. TOTAL DEPTH OF HOLE <b>104.5</b>				18. TOTAL CORE RECOVERY FOR BORING <b>0</b>		
				19. SIGNATURE OF INSPECTOR <b>Y.M. Accote</b>		
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	10		K-bn, variegated, POORLY GRADED GRAVEL w/ SILT & SAND, Loose (difficult drilling), dry <u>STEILACOOM</u>			Sample #1
						Sample #2
						Sample #3
	20		Base of STEILACOOM GRAVEL			Sample #4
						Sample #5
	30					Sample #6
			med bn, variegated rocks, in POORLY GRADED GRAVEL w/ SILT, locally w/ CLAY (to 35') then SILTY GRAVEL to 58.5', (GP-GM, GP-GC, then GM). 40' Sample is POORLY GRADED GRAVEL w/ SILT and SAND (GP-GM). Overall is med. dense, moist, and sl.-med wet @ 40' f.-med grained <u>TILL</u>			Sample #7
	40					Sample #8
						Sample #9
	50					Sample #10
						Sample #11
	60		Base of TILL (UPPER)			Sample #12 (1 <sup>st</sup> shoe sample)
			16-bn, 44-bn, variegated, WELL GRADED SAND w/ SILT and GRAVEL (SW-SH) VF - coarse grained OUTWASH SAND med. dense, sl. wet			Sample #13
	70		med-bn, variegated, POORLY GRADED GRAVEL w/ SILT & SAND (GP-GM) in med dense to dense, sl. wet, f.-med grained <u>LEAKY TILL</u>			Sample #14
			Base of LOWER TILL (LEAKY)			Sample #15
	80					Sample #16
			16-bn to 44-bn, variegated rock, POORLY GRADED GRAVEL w/ SAND (GP) in a loose, med to v. wet, f.-med grained <u>OUTWASH GRAVEL</u>			Sample #17
	90					Sample #18
			GRADATIONAL CONTACT 16 or-bn (45'), or-bn + 61-99 (100') WELL GRADED SAND w/ GRAVEL (SW) is v. dense, v. wet OUT. SAND			Sample #19

NC

DRILLING LOG		DIVISION <u>N.P.D.</u>		INSTALLATION <u>Seattle District</u>		SHEET <u>2</u> OF 2 SHEETS	
1. PROJECT <u>FL. LEWIS Logistics Center</u>				10. SIZE AND TYPE OF BIT <u>14 3/4" x 23 1/2" 7D; air rotary</u>			
2. LOCATION (Coordinates or Section) <u>N. 651987.6638 E. 1497528.4325</u>				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) <u>NGVD 29</u>			
3. DRILLING AGENCY <u>Clemons Drilling Company</u>				12. MANUFACTURER'S DESIGNATION OF DRILL <u>Koching Needs for 5515 III air rotary</u>			
4. HOLE NO. (As shown on drawing title and file number) <u>LR-2</u>				13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN <u>21</u>		DISTURBED <u>0</u>	
5. NAME OF DRILLER <u>H.R. Gwin</u>				14. TOTAL NUMBER CORE BOXES <u>0</u>		15. ELEVATION GROUND WATER <u>12.62</u>	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				16. DATE HOLE <u>8/24/92</u>		COMPLETED <u>8/24/92</u>	
7. THICKNESS OF OVERBURDEN <u>N/A</u>				17. ELEVATION TOP OF HOLE <u>277.96</u>			
8. DEPTH DRILLED INTO ROCK <u>N/A</u>				18. TOTAL CORE RECOVERY FOR BORING <u>0</u>			
9. TOTAL DEPTH OF HOLE <u>104 1/2</u>				19. SIGNATURE OF INSPECTOR <u>V.M. J. Allstate</u>			
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	
	100		OUTWASH SAND			Sample #20	
			94. bty. nearly bk, DAILY GRADED SAND w/ CLAY (SP-SC) LOOSE, moist, v.f. to F. grained w/ wood			Sample #21	
			<u>KITSAP FM.</u>			* Contact between OUTWASH SAND & KITSAP appears intertongued, or 1-5' of reworked KITSAP	

DRILLING LOG		DIVISION		INSTALLATION		Hole No.	
		N.P.D.		Seattle District		1X-17	
1. PROJECT		10. SIZE AND TYPE OF BIT		11. DATE FOR ELEVATION SHOWN (TBM or BSI)		SHEET 1 OF 1 SHEETS	
2. LOCATION (Coordinates or Station)		12. MANUFACTURER'S DESIGNATION OF DRILL		13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN		14. TOTAL NUMBER CORE BOXES	
3. DRILLING AGENCY		15. ELEVATION GROUND WATER		16. DATE HOLE		17. ELEVATION TOP OF HOLE	
4. HOLE NO. (As shown on drawing title and file number)		16. DATE HOLE		17. ELEVATION TOP OF HOLE		18. TOTAL CORE RECOVERY FOR BORING	
5. NAME OF DRILLER		17. ELEVATION TOP OF HOLE		18. TOTAL CORE RECOVERY FOR BORING		19. SIGNATURE OF INSPECTOR	
6. DIRECTION OF HOLE		18. TOTAL CORE RECOVERY FOR BORING		19. SIGNATURE OF INSPECTOR			
7. THICKNESS OF OVERBURDEN		19. SIGNATURE OF INSPECTOR					
8. DEPTH DRILLED INTO ROCK							
9. TOTAL DEPTH OF HOLE							
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	
			minimal recovery/cuttings 16-bn, w/gy, bk, bn rocks in POORLY GRADED GRAVEL (GP) w/ sporadic cobbles.			Sample #1 - No Returns, No Sample.	
			Base of STELLACOOM			Sample #2, 10'	
			16-bn, gy-bn SILTY SAND w/ GRAVEL (SM), m-dense, moist TILL-LIKE OUTWASH SAND			Sample #3, 15'	
			med bn, w/gy, bk, bn, wh, tan rocks in POORLY GRADED GRAVEL w/ SILT (GP-GM) to POORLY GRADED GRAVEL (GP) Unit is v. dense, sl. moist TILL			Sample #4, 20'	
						Sample #5, 25'	
			16-gy-bn overall, variegated rocks in POORLY GRADED GRAVEL (GP). Unit is med. DENSE, moist to SL. WET.			Sample #6, 30'	
			OUTWASH GRAVEL			Sample #7, 35'	
			Unit becomes silty			Sample #8, 40'	
			v. soft, rapid penetration, TILL(?)			Sample #9, 45'	
			gy, bk, bn, wh, tan rocks in WELL GRADED GRAVEL w/ SAND (GW). Unit is LOOSE, v. WET			Sample #10, 50'	
			OUTWASH GRAVEL			Sample #11, 54-55'	
			TD				

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DRILLING LOG	DIVISION <b>N.P.D.</b>	INSTALLATION <b>Swelle District</b>	SHEET / OF 1 SHEETS
1. PROJECT <b>FT. LEWIS Logistics Center</b>		10. SIZE AND TYPE OF BIT <b>1 1/4" TO 20"</b>	
2. LOCATION (Coordinates of Station) <b>N. 652569, 4252 E. 1496621, 4258</b>		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) <b>NGVD 29</b>	
3. DRILLING AGENCY <b>Jensen Drilling Company</b>		12. MANUFACTURER'S DESIGNATION OF DRILL <b>Kochring Speedstar SS-15 III air rotary</b>	
4. HOLE NO. (As shown on drawing title and file number) <b>LX-18</b>		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED <b>9</b> UNDISTURBED <b>0</b>	
5. NAME OF DRILLER <b>Art Gwin</b>		14. TOTAL NUMBER CORE BOXES <b>0</b>	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER <b>14.95 TOP OF CASE</b>	
7. THICKNESS OF OVERBURDEN <b>N/A</b>		16. DATE HOLE STARTED <b>9/1/92</b> COMPLETED <b>9/3/92</b>	
8. DEPTH DRILLED INTO ROCK <b>0</b>		17. ELEVATION TOP OF HOLE <b>279.09</b>	
9. TOTAL DEPTH OF HOLE <b>44</b>		18. TOTAL CORE RECOVERY FOR BORING <b>0</b>	
		19. SIGNATURE OF INSPECTOR <b>Jim Sawate</b>	

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOV- ERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	10		med bn, gy-bn, variegated POORLY GRADED GRAVEL w/ SAND (GP). Loose (difficult drilling), dry. STEELACOM GRAVEL			Sample #1,
			BASE OF STEELACOM			Sample #2 (1 <sup>st</sup> sieve sample)
	20		med bn, variegated, POORLY GRADED GRAVEL w/ SILT & SAND (GP-GM), sl. dense, moist TILL			Sample #3
			(GP-GM to GP) med bn, gy-bn, variegated rocks, POORLY GRADED GRAVEL w/ SILT & SAND to POORLY GRADED GRAVEL, sl. - med dense, moist LILL-like OUTWASH GRAVEL			Sample #4 (sl. clayey)
	30		med bn, variegated, POORLY GRADED GRAVEL w/ SILT & SAND (GP-GM) sl. dense, moist TILL			Sample #5
			12-med. bn, variegated, POORLY GRADED GRAVEL w/ SAND (GP), sl. med dense, moist, LILL-like OUTWASH GRAVEL			Sample #6
	40		GAY, soft, moist, extremely fine grained SILT, CLAY and SAND w/ 25% GRAVEL			Sample #7
			T.D. Hole			Sample #8 Casing set to 43'

DRILLING LOG		DIVISION NORTH PACIFIC	INSTALLATION SEATTLE DISTRICT	SHEET 1 OF 1 SHEETS
1. PROJECT FORT LEWIS LOGISTICS CENTER		10. SIZE AND TYPE OF BIT 14 3/4" TO 23" 11 3/4" TO 20"		
2. LOCATION (Coordinates or Station) 452525, 4801 E: 1496052, 7814		11. DATUM FOR ELEVATION SHOWN (FSN - AMSL) NGVD of 1929		
3. AGENCY JENSEN DRILLING CO. 55		12. MANUFACTURER'S DESIGNATION OF DRILL KOEHLING SPEEDSTAR SS-15 III AIR ROTARY		
40. (As shown on drawing title) LX-19		13. TOTAL NO. OF OVER- BURDEN SAMPLES TAKEN		
		DISTURBED 17 UNDISTURBED 0		
5. NAME OF DRILLER ART GWIN		14. TOTAL NUMBER CORE BOXES N/A		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER 265.38		
7. THICKNESS OF OVERBURDEN N/A		16. DATE HOLE 29 MAR 43		
8. DEPTH DRILLED INTO ROCK N/A		17. ELEVATION TOP OF HOLE 275.78 (Ground)		
9. TOTAL DEPTH OF HOLE 87'		18. TOTAL CORE RECOVERY FOR BORING N/A		
		19. SIGNATURE OF INSPECTOR G. B. Hiley		

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	5 COR RECOG ERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	10		gy. bk bn gn rocks and occasional cobbles and dr bn fines in POORLY GRADED SAND WITH GRAVEL (GP) DAMP (?) FIRM STELLACOM GRAVEL		SAMPLE #1, 5'	
	15		gy. bk bn gn rocks and cobbles w/ mostly 1/4 bn fines in POORLY GRADED GRAVEL WITH SAND (GP), dense. moist STELLACOM GRAVEL		SAMPLE #2, 10'	
	20		CLAY LAYER @ 19'		SAMPLE #3, 15'	
	25		gy. bk bn gn gravel, 1/4 bn/ 1/4 gy fines WELL GRADED GRAVEL WITH SAND (GW), typically 'pea' gravel, wet, loose OUTWASH GRAVEL		SAMPLE #4, 20'	
	30		AS ABOVE, but POORLY GRADED GRAVEL WITH SAND (GP), wet, loose OUTWASH GRAVEL		SAMPLE #5, 25' 1 3/4" SIEVE SAMPLE	
	35		Margined grains in WELL GRADED SAND WITH GRAVEL (SW) LOOSE, WET OUTWASH SAND		SAMPLE #6, 30'	
	40				SAMPLE #7, 35'	
	45				SAMPLE #8, 40'	
	50		gy. bk bn gn rocks and 1/4 gy/1/4 bn clayey silt in (mostly) POORLY GRADED GRAVEL w/ SAND (GP), becoming POORLY GRADED GRAVEL w/ SILTY CLAY & SAND (GP-GC) WET, FIRM TILL SILT SAND		SAMPLE #9, 45'	
	55		gy. bk bn gn rocks & 1/4 bn/1/4 gy fines in POORLY GRADED SAND w/ GRAVEL, WET, LOOSE OUTWASH SAND/OUTWASH GRAVEL		SAMPLE #10, 50'	
	60				SAMPLE #11, 55'	
	65		gy. bk bn gn rocks w/ 1/4 bn/ 1/4 gy fine silt in POORLY GRADED GRAVEL WITH SAND (GP) WET, LOOSE, PRIME TILL		SAMPLE #12, 60'	
	70				SAMPLE #13, 65'	
	75		gy. bk bn gn gravel, sand decreasing w/ depth, clean WELL GRADED GRAVEL WITH SAND (GW), WET, LOOSE OUTWASH GRAVEL		SAMPLE #14, 70'	
	80				SAMPLE #15, 75'	
	85		gy. bk bn gn gravel, POORLY GRADED GRAVEL w/ SAND (GP) MARKED INCREASE IN FINES @ 87'		SAMPLE #16, 80'	
	87'				SAMPLE #17, 85'	

<b>DRILLING LOG</b>		DIVISION <b>NORTH PACIFIC</b>		INSTALLATION <b>SEATTLE DISTRICT</b>		Hole No. <b>LC-21</b>	
1. PROJECT <b>FT LEWIS LOGISTICS CENTER</b>				10. SIZE AND TYPE OF BIT <b>CP-7000 ROTARY TO 55'</b>		SHEET <b>1</b> OF 2 SHEETS	
2. LOCATION (Coordinate or Station)				11. DATUM FOR ELEVATION SHOWN (TBM or BBL)			
3. DRILLING AGENCY <b>FOUR PUMP &amp; SUPPLY</b>				12. MANUFACTURER'S DESIGNATION OF DRILL <b>CP-7000 ROTARY TO 55' / REXSTONE C</b>			
4. HOLE NO. (As shown on drawing title and BFO number) <b>LC-21</b>				13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN		DISBURSED UNDISBURSED	
5. NAME OF DRILLER <b>JOHN MORRIS</b>				14. TOTAL NUMBER CORE BOXES			
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER			
7. THICKNESS OF OVERBURDEN				16. DATE HOLE <b>7-14-91</b>		STARTED <b>7-26-91</b>	
8. DEPTH DRILLED INTO ROCK				17. ELEVATION TOP OF HOLE		COMPLETED <b>7-26-91</b>	
9. TOTAL DEPTH OF HOLE				18. TOTAL CORE RECOVERY FOR BORING			
				19. SIGNATURE OF INSPECTOR ( <b>STANLEY D. ASSOCIATES</b> ) <b>THOMAS J. JONES</b> / <b>JACOB E. STEPHENS, JR.</b>			


ELEVATION c	DEPTH b	LEGEND a	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0'		~ RECENT SOILS, ALSO CONTAIN PEBBLES & COBBLES... ~ "STILACOM" GRAVELS			
	10'		VASHON TILL: CLAY, SILT MED. FINE SAND, MINOR PEBBLES. ~ OUTWASH SAND, MOD. WELL SORTED. ~ OUTWASH GRAVEL			
	20'					
	30'		VASHON TILL OR POSS. GLACIAL OUTWASH GRAVELS.			
	40'					
	50'		(COLOR LET SHOWN) GLACIAL GRAVELS (60-80% C&S) MED. - COARSE GRAIN SAND PEBBLES & COBBLES FREQUENT INTERST. S&VOL.			
	60'		GLACIAL OUTWASH w/ MED. 3-4" COBBLES (ALL 100%) ~ SAND LENS			
	70'		GLACIAL OUTWASH w/ 80% 3-4" COBBLES, 10% PEBBLES, 10% SAND & SILT.			
	80'		~ COARSE GRAINED SAND w/ SAND PEBBLES, (90% SAND)...			
	90'		GLACIAL OUTWASH w/ 80% 3-4" COBBLES, 10% PEBBLES, 10% SAND & SILT. COBBLES ALL 100% LATITE, AND, & DECS. AND.			
	100'		MED. GRAINED SAND 80%, PEBBLES 15%, 5% SILT.			

NC

CP-7000 ROTARY

REXSTONE CABLE

J4-23

DRILLING LOG (Cont Sheet)			ELEVATION TOP OF HOLE		Hole No. <u>LC-27</u>	
PROJECT <u>FT LEWIS SCIENTIFIC CENTER</u>			INSTALLATION <u>SEATTLE DISTRICT</u>		SHEET 2 OF 2 SHEETS	
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV. EAT e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	00'		<p>(LET BROWN) GLACIAL SANDY GRAVELS W/ SMALLER 1/2" PEBBLES.</p> <p>GRAY FINE GRAINED MOD. SAND (70% RYE GRAIN)</p> <p>SILT CLAY, W/ 5% SAND. VERY TIGHT &amp; APPROACHING DRY</p>		<p>↓</p> <p>TD 100'</p>	

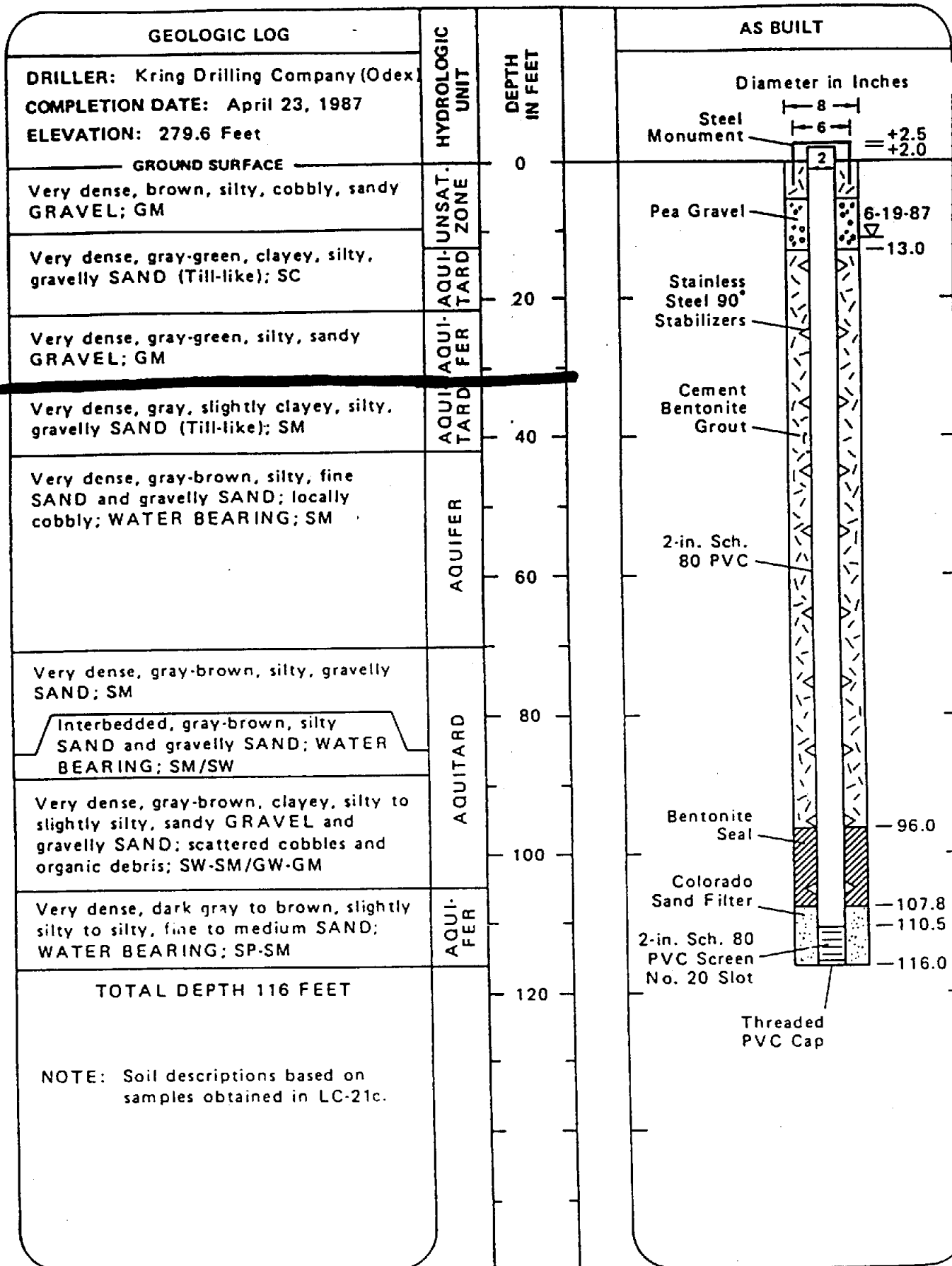
J4-24



DRILLING LOG		PROJECT		INSTALLATION		SHEET 1 OF 1 SHEETS	
1. PROJECT				10. SIZE AND TYPE OF BIT 8 inch Hollow Flight Auger			
2. LOCATION (Continuation of Section)				11. ELEVATION OF SURFACE OF GROUND			
Ft. Lewis Logistics Center				12. MANUFACTURER'S IDENTIFICATION OF DRILL			
3. DRILLING AGENCY				Mobile 8-80			
11.5 Army Corps of Engineers				13. TOTAL NO. OF CORES		14. TOTAL NO. OF CORES	
4. HOLE NO. (As shown on drawing sheet and on map)				10		10	
85-LC-21				15. TOTAL NUMBER CORE BORES		8	
5. NAME OF DRILLER				16. ELEVATION GROUND WATER			
6. DIRECTION OF HOLE				17. DATE HOLE			
VERTICAL <input checked="" type="checkbox"/> INCLINED <input type="checkbox"/> DGS. FROM VERT.				STARTED 4-16-85 COMPLETED 4-16-85			
7. THICKNESS OF OVERBURDEN				18. ELEVATION TOP OF HOLE 279.22			
8. DEPTH DRILLED INTO ROCK NA				19. TOTAL CORE RECOVERY PER BORER			
9. TOTAL DEPTH OF HOLE 43.0'				20. SIGNATURE OF INSPECTOR			
				Glen Kato			
ELEVATION	DEPTH	LOGGED	CLASSIFICATION OF MATERIALS (Photograph)	SCORE RECOVERY	DATE ON SAMPLE	REMARKS (Drilling time, core loss, depth of penetration, etc., if significant)	
279.22	0		GM, Silty GRAVEL (3") with organic debris and scattered cobbles (12"). Loose, moist, black.	A		6" Guard Casing	
	5		GP-GM, Sandy GRAVEL with silt and occasional cobbles (12"). Loose, moist, light brown.	B			
	10		GP, Sandy, GRAVEL with scattered cobbles (12") and occasional boulders (18"). Dense, moist to wet, light gray-light brown.	C		Cement/Bentonite Surface Seal	
	15		GP-GM, Sandy GRAVEL with silt and occasional cobbles (8"). Med-dense, moist to wet, light brown to light gray.	D		April 19, 10.3'	
	20			E		April 16, 12.5'	
	25		GP, Sandy GRAVEL with scattered cobbles. Loose, wet, light brown-light gray.	F		2" I.D. Blank Riser PVC Pipe	
	30		GM, Silty, Sandy GRAVEL (3") dense, wet, blue-gray.	G		Caved Hole	
	35		Drilling loose from 32.0'	H			
	40			I		2" I.D. PVC Screen (0.020 slot size)	
	45		GP-GM, Sandy GRAVEL with silt. Dense, wet, gray-light brown.	J		PVC End Cap Piezometer (42.2')	
	50		Bottom of Hole at 43.0'. Hole was dug with backhoe to 11'.				

J4-25

# LOG & AS-BUILT DIAGRAM



**SHANNON & WILSON, INC.**



WASTE MANAGEMENT SERVICES  
SEATTLE, WASHINGTON  
(206) 632-8020

Ft. Lewis Logistics Center  
Pierce County, Washington

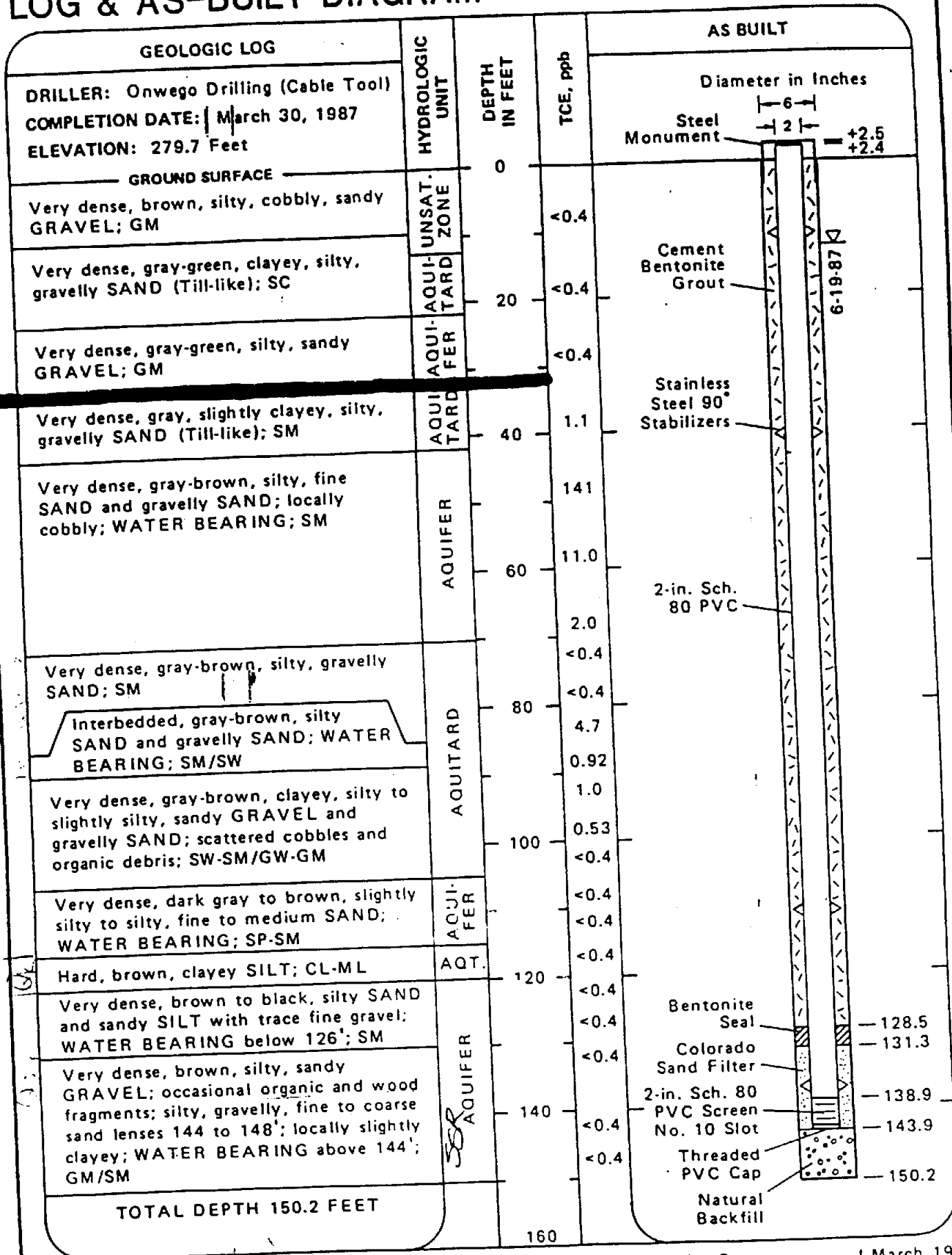
**MONITORING WELL LC-21b**

March 1988

T-1016-05

**J4-26**

# LOG & AS-BUILT DIAGRAM



SHANNON & WILSON, INC.



WASTE MANAGEMENT SERVICES  
SEATTLE, WASHINGTON  
(206) 632-8020

Ft. Lewis Logistics Center  
Pierce County, Washington

MONITORING WELL LC-21c

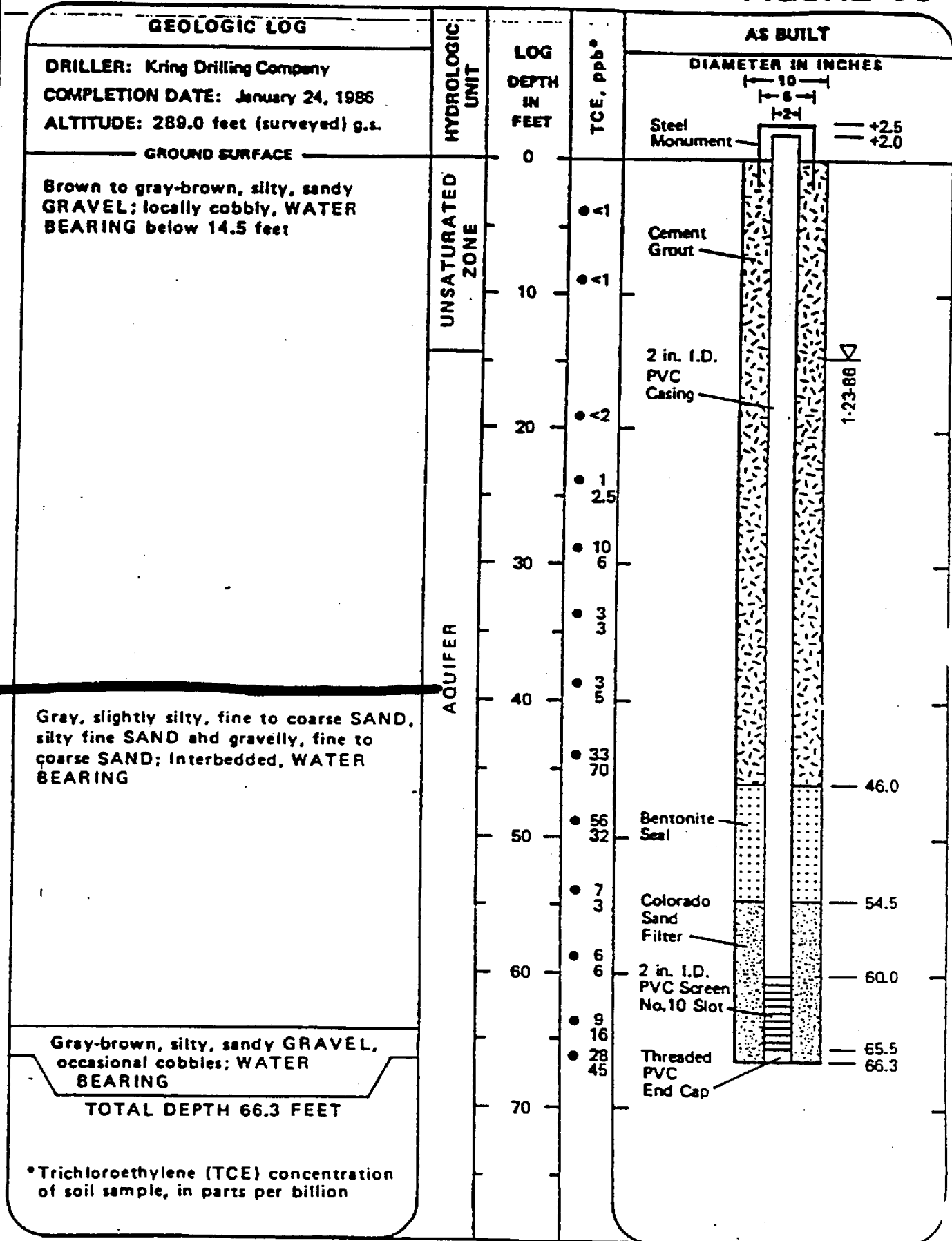
March 1988

T-1016-05

J4-27

# LOG & AS-BUILT DIAGRAM

FIGURE 33



**SHANNON & WILSON, INC.**  
 **WASTE MANAGEMENT SERVICES**  
 SEATTLE, WASHINGTON  
 (206) 632-8020

FT. LEWIS LOGISTICS CENTER  
 PIERCE COUNTY, WASHINGTON  
**MONITORING WELL**  
 LC-21-1

MAR. 1986  
 W-4487-03  
 J4-28

DRILLING LOG		DIVISION		INSTALLATION		SHEET	
1. PROJECT				10. SIZE AND TYPE OF BIT 8 Inch Hollow Flight Auger			
11. DATUM FOR ELEVATION SHOWN (TBM or B.M.)							
12. LOCATION (Coordinates or Station)				13. MANUFACTURER'S DESIGNATION OF DRILL			
Fr. Lewis Logistics Center				Mobile B-80			
14. DRILLING AGENCY				15. TOTAL NO. OF OVER- BURDEN SAMPLES TAKEN			
U.S. Army Corps of Engineers				15 DISTURBED 15 UNDISTURBED 8			
16. HOLE NO. (As shown on drawing title and file number)				17. TOTAL NUMBER CORE BOXES			
85-LC-23				0			
18. NAME OF DRILLER				19. ELEVATION GROUND WATER			
20. DIRECTION OF HOLE				21. DATE HOLE			
<input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				STARTED 4-22-85 COMPLETED 4-23-85			
22. THICKNESS OF OVERBURDEN				23. ELEVATION TOP OF HOLE 280.51			
24. DEPTH DRILLED INTO ROCK NA				25. TOTAL CORE RECOVERY FOR BORING			
26. TOTAL DEPTH OF HOLE 46.5'				27. SIGNATURE OF INSPECTOR			
				Robert Moran			
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	
			GM, Silty GRAVEL, medium, moist, black.	A	X	6" Guard Casing	
			GP, Sandy GRAVEL with cobbles. Dense, moist, brown.	B	X		
	5			C	X		
	10		GM, Silty Sandy GRAVEL (2- 1/2"). Dense, wet, brown- gray.	D	X	Cement/ Bentonite Surface Seal	
	15			E&F	X		
	20		Smaller gravels (1-1/2"), sandier.	G	X	2" I.D. Blank Riser PVC Pipe	
	25			H&I	X		
	30			J	X		
	35		Increase in gravel size and silt content.	K&L	X	Caved Hole	
	40			M	X		
	45			N&O	X		
	50		ML, Sandy (fine) SILT, dense, moist, impervious, blue- gray. Occasional small gravel.			2" I.D. PVC Screen (0.020 slot size) Piezometer (45.0')	
			Bottom of Hole at 46.5'.			PVC End Cap	

J4-29



DRILLING LOG			Division		INSTALLATION		SHEET 1 OF 1 SHEETS	
1. PROJECT					10. SIZE AND TYPE OF BIT 8 inch Hollow Flight Auger			
2. LOCATION (Continuation of Sheet)					11. DATE FOR ELEVATION, MOISTURE, etc.			
Fr. Lewis Logistics Center					12. MANUFACTURER'S DESIGNATION OF DRILL			
3. DRILLING AGENCY					Mobile 8-80			
U.S. Army Corps of Engineers					13. TOTAL NO. OF OVER SAMPLES TAKEN		14. DISTURBED	15. UNDISTURBED
4. HOLE NO. (To appear on drilling plan and on label)					85-LC-26		12	0
5. NAME OF DRILLER					16. TOTAL NUMBER CORE DEGS			
					0			
6. DIRECTION OF HOLE					17. ELEVATION GROUND WATER			
<input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.					18. DATE HOLE			
					STARTED		COMPLETED	
					4-25-85		4-26-85	
7. THICKNESS OF OVERBURDEN					19. ELEVATION TOP OF HOLE			
					275.81			
8. DEPTH DRILLED INTO ROCK					20. TOTAL CORE RECOVERY PER BORING			
NA					0			
9. TOTAL DEPTH OF HOLE					21. SIGNATURE OF INSPECTOR			
36.5'					Robert Moran			
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Flowchart)	% CORE RECOVERY	DOE OR SAMPLE NO.	REMARKS (Showing Name, water level, depth of overburden, etc., if significant)		
			GM, Silty GRAVEL with some large cobbles (8"). Medium-dense, moist, black (organic).	A		6" Guard Casing		
				B		2" I.D. Blank Riser PVC Pipe		
	5					April 25, 6.0'		
			GP, Sandy GRAVEL with some silt. Medium-dense, wet, brown. (Cobbles from 10.0' to 15.0').	C		April 26, 8.3'		
	10					Cement/Bentonite Surface Seal		
			GM, Silty Sandy GRAVEL (2"). Dense, wet, brown with lenses of clean sandy gravel, very dense. (Fewer cobbles below 15.0').	DGE				
	15							
				F		Caved Hole		
	20							
				GCH				
	25							
				I		2" I.D. PVC Screen (0.020 slot Size) Piezometer (36.4')		
	30							
			"J" (Sample contains till)	JCK				
	35							
			Bottom of Hole at 36.5' in impervious cemented gravels. (very dense).	L		PVC End Cap		
	40							
	45							
	50							

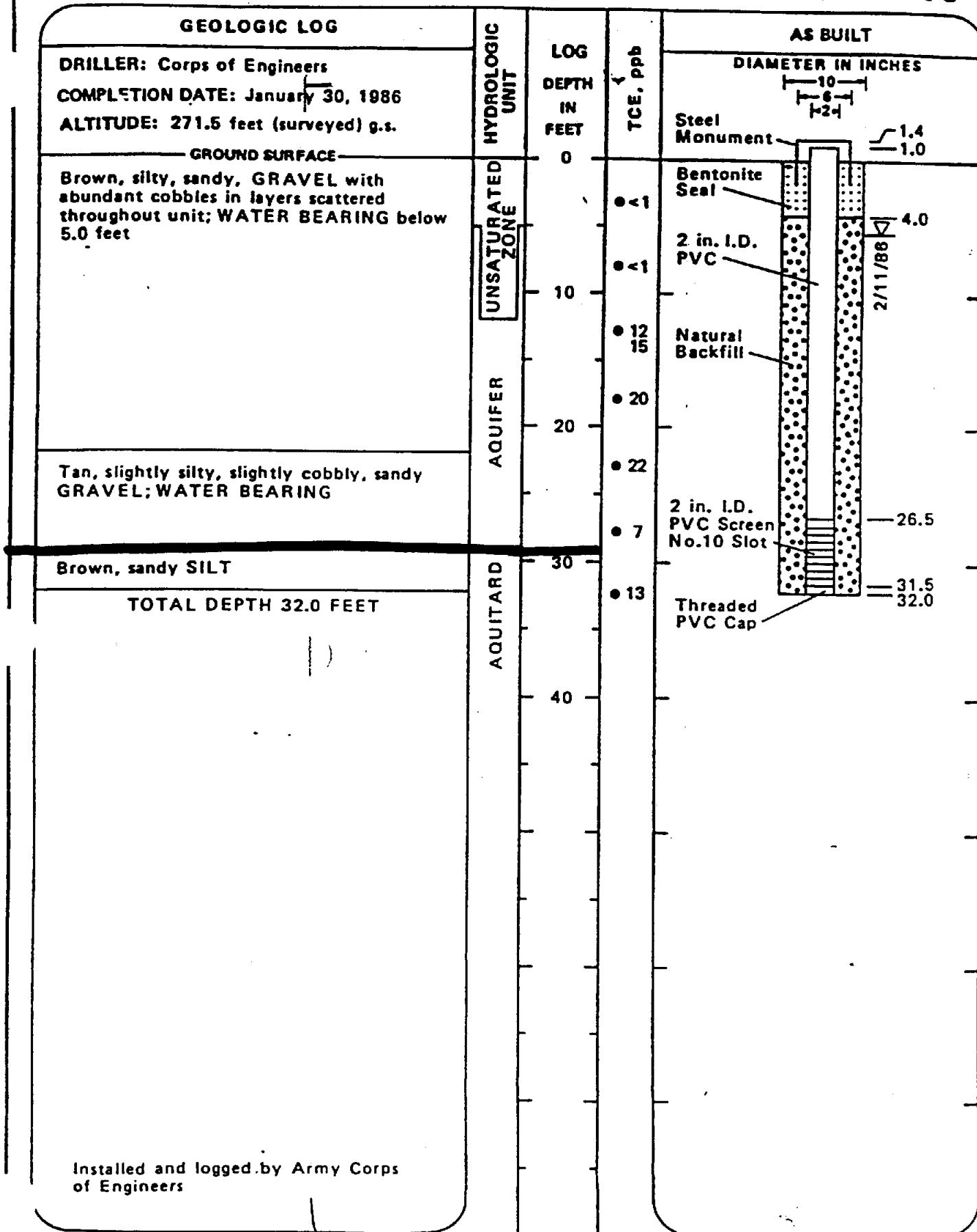
J4-31





# LOG & AS-BUILT DIAGRAM

FIGURE 68



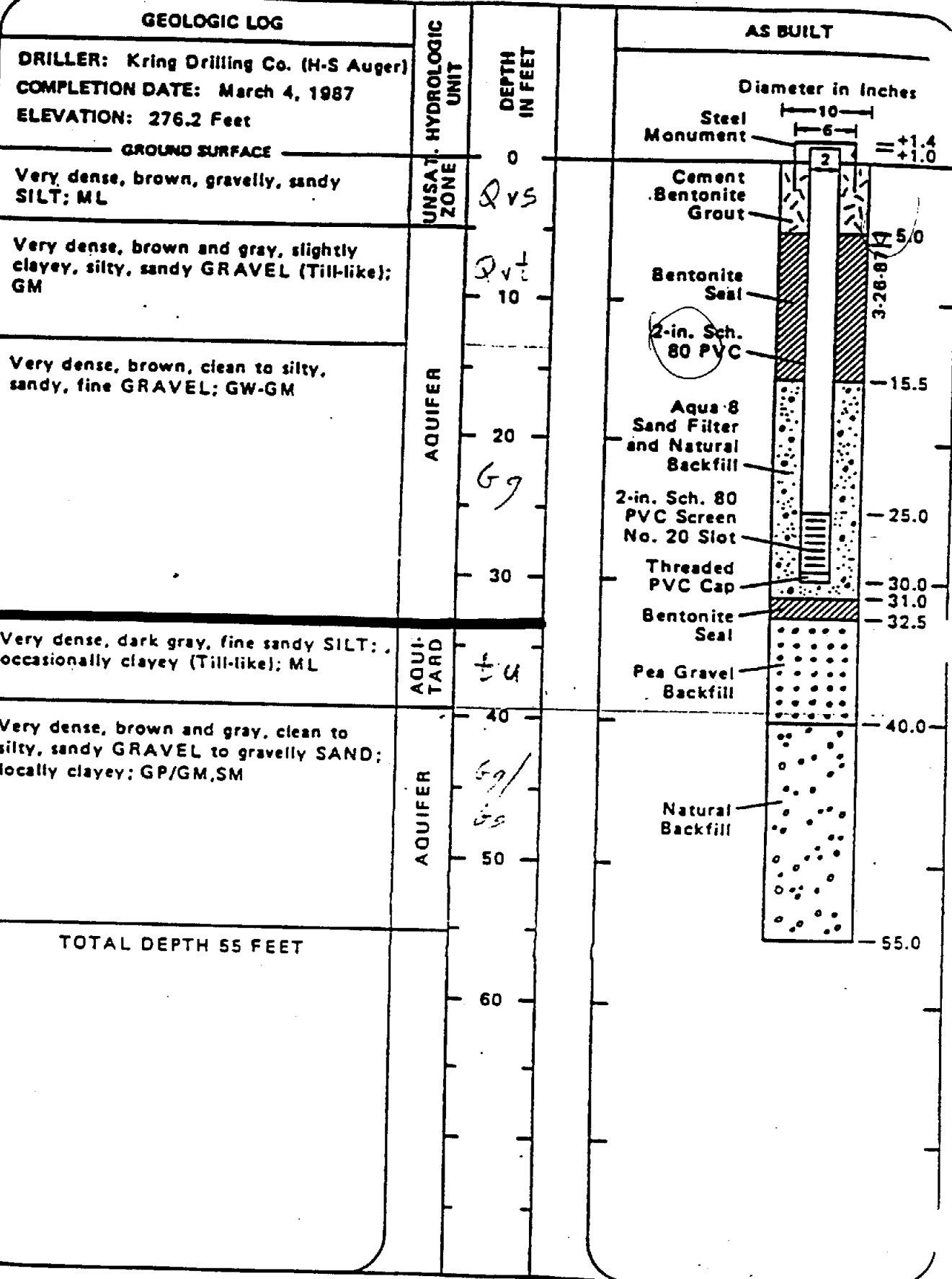
**SHANNON & WILSON, INC.**  
 WASTE MANAGEMENT SERVICES  
 SEATTLE, WASHINGTON  
 (206) 632-8020

FT. LEWIS LOGISTICS CENTER  
 PIERCE COUNTY, WASHINGTON  
**MONITORING WELL**  
 LC-50

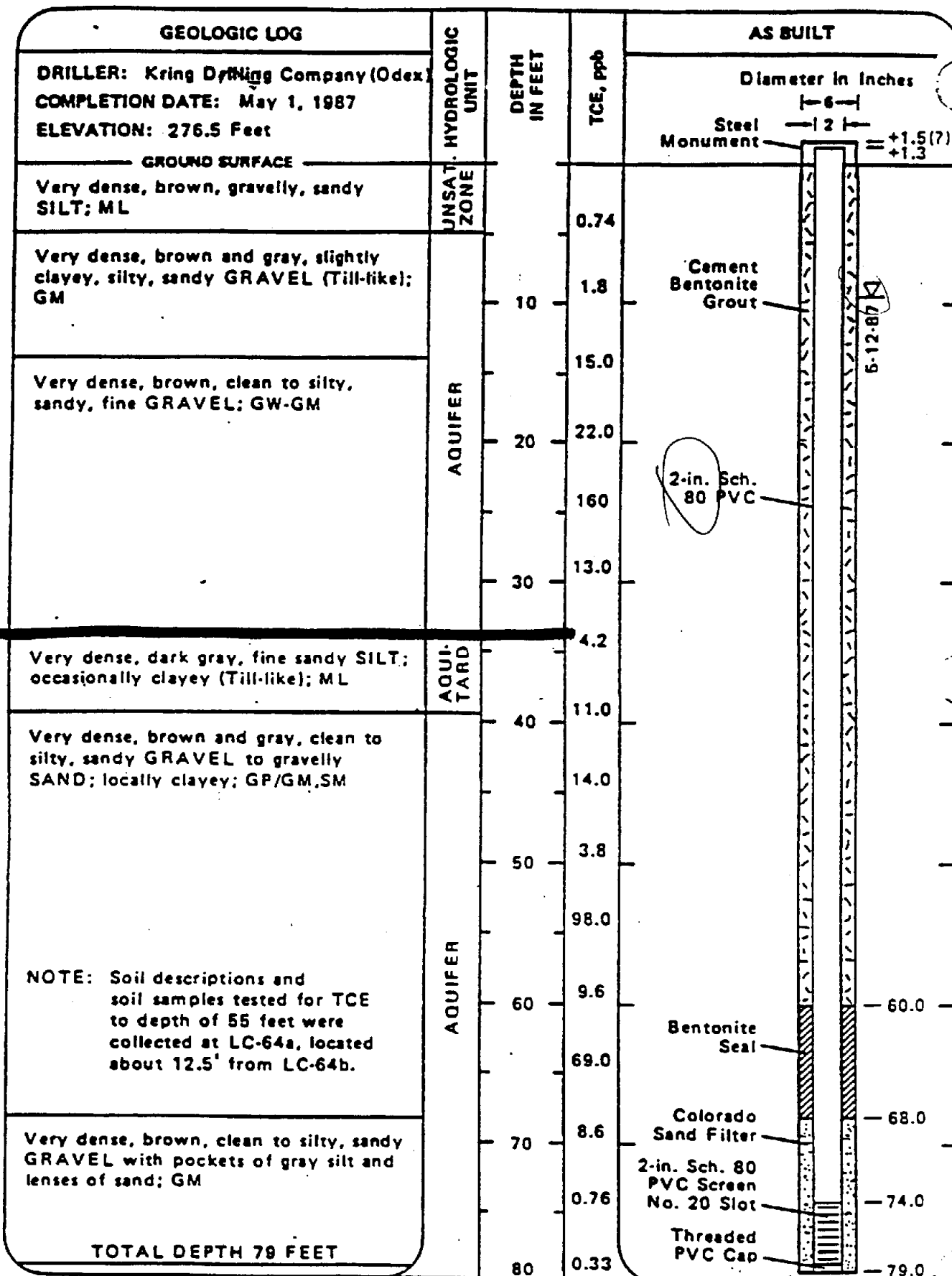
MAR. 1986  
 W-4487-03

J4-33

# LOG & AS-BUILT DIAGRAM



# LOG & AS-BUILT DIAGRAM



**SHANNON & WILSON, INC.**  
 WASTE MANAGEMENT SERVICES  
 SEATTLE, WASHINGTON  
 (206) 632-8020

Ft. Lewis Logistics Center  
 Pierce County, Washington

MONITORING WELL LC-64b

March 1988  
 T-1016-05  
 J4-35

BELLING LOG		DIVISION <b>NORTH PACIFIC</b>		INSTALLATION <b>SCOTTIE DISTRICT</b>		SHEET <b>1</b> OF <b>1</b> SHEETS	
PROJECT <b>PT LEWIS LOGISTICS CENTER</b>				12. SIZE AND TYPE OF BIT <b>1 1/2" BITUMEN FOR ELEVATION BROWN (TYPE - B)</b>			
LOCATION (Continuation of Section)				13. MANUFACTURER'S DESIGNATION OF BRILL <b>CHICAGO MANUFACTURING CO. 6.50</b>			
1. DRILLING AGENCY <b>FORE PUMP &amp; PUMP</b>				14. TOTAL NO. OF OVER- BURDEN SAMPLES TAKEN			
2. HOLE NO. (As shown on drawing and on tag) <b>LC-106</b>				15. TOTAL NUMBER CORE BOXES			
3. NAME OF DRILLER <b>MIKE LARSEN</b>				16. ELEVATION GROUND WATER			
4. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED <input type="checkbox"/> 000. FROM VERT.				17. DATE HOLE <b>7-27-91</b>		STARTED <b>7-29-91</b>	
5. THICKNESS OF OVERBURDEN				18. ELEVATION TOP OF HOLE			
6. DEPTH DRILLED INTO ROCK				19. TOTAL CORE RECOVERY PER BORING			
7. TOTAL DEPTH OF HOLE <b>100'</b>				20. SIGNATURE OF INSPECTOR <b>STANLEY G. STEPHENS</b>			
ELEVATION	DEPTH	LOGGING	CLASSIFICATION OF MATERIALS (Description)	1. CORE RECOVERY %	2. BOX OR SAMPLE NO.	REMARKS (e.g., depth of penetration, etc., if significant)	
			<b>LOCAL SOIL.</b>				
			<b>GLACIAL GRAVEL</b>				<b>LC-106-5'</b>
							<b>LC-106-10</b>
							<b>LC-106-15</b>
			<b>GLACIAL OUTWASH GRAVEL</b>				<b>LC-106-20</b>
			<b>SILT &amp; CLAY 5%</b>				<b>LC-106-25</b>
			<b>SAND &amp; GRAVEL 20%</b>				<b>LC-106-30</b>
			<b>PEBBLES &amp; COBBLES 75%</b>				<b>LC-106-35</b>
			<b>GRAVEL 10%</b>				<b>LC-106-40</b>
			<b>SAND 5%</b>				<b>LC-106-45</b>
			<b>PEBBLES &amp; COBBLES 75%</b>				<b>LC-106-50</b>
			<b>GRAVEL 10%</b>				<b>LC-106-55</b>
			<b>SAND 5%</b>				<b>LC-106-60</b>
			<b>GLACIAL OUTWASH GRAVEL</b>				<b>LC-106-65</b>
			<b>SILT &amp; CLAY 5%</b>				<b>LC-106-70</b>
			<b>SAND &amp; GRAVEL 20%</b>				<b>LC-106-75</b>
			<b>PEBBLES &amp; COBBLES 75%</b>				<b>LC-106-80</b>
			<b>GRAVEL 10%</b>				<b>LC-106-85</b>
			<b>SAND 5%</b>				<b>LC-106-90</b>
			<b>PEBBLES &amp; COBBLES 75%</b>				<b>LC-106-95</b>
			<b>GRAVEL 10%</b>				<b>LC-106-100</b>

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# SUMMARY SHEET

Wells No. LC 107

DRILLING LOG		DIVISION <b>NORTH PACIFIC</b>		INSTALLATION <b>SEATTLE DISTRICT</b>		SHEET 1 OF 1 SHEETS	
PROJECT <b>FOOT LEWIS LOGISTICS CENTER</b>				B. SIZE AND TYPE OF BIT <b>HOLT OPER 6 7/8</b>			
C. LOCATION (Continuation of Section)				D. DATE FOR ELEVATION MEASUREMENT <b>23 JUL 91</b>			
E. DRILLING AGENCY <b>FOGLE PUMP &amp; SUPPLY</b>				F. MANUFACTURER'S DESIGNATION OF DRILL <b>WS 650 - CHICAGO PNEUMATIC</b>			
G. HOLE NO. (As shown on drawing and on this sheet) <b>LC 107</b>				H. TOTAL NO. OF OVER-BOURDEN SAMPLES TAKEN		I. DISTURBED	
J. NAME OF DRILLER <b>MIKE LEACH</b>				K. TOTAL NUMBER CORE BORES			
L. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> SLOPED <input type="checkbox"/> HOR. FROM VERT.				M. DATE HOLE <b>23 JUL 91</b>		N. COMPLETED <b>24 JUL 91</b>	
O. THICKNESS OF OVERBOURDEN				P. ELEVATION TOP OF HOLE			
Q. DEPTH DRILLED INTO ROCK <b>0'</b>				R. TOTAL CORE RECOVERY FOR BORING			
S. TOTAL DEPTH OF HOLE <b>99 ft.</b>				T. SIGNATURE OF INSPECTOR <b>William L. Smallwood</b>			

ELEVATION	DEPTH	LOGGING	CLASSIFICATION OF MATERIALS (Continued)	3 CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Including date, time, depth of observation, etc., if significant)
			<b>10-12" SAND - 10-12" GRAVEL</b> <b>10-12" SAND - 10-12" GRAVEL</b>			<b>23 JUL 91 11:30 START DRILLING</b>
			<b>"STELLARON GRAVEL"</b> <b>LIGHT SAND - SANDY/CLAY MEDIUM</b> <b>POSSIBLY OVERBURDEN - OVERBOURDEN -</b> <b>ROUNDING FINE/COARSE</b>			<b>LC 107-1 (5)</b>
			<b>FIRST APPROPRIATE - NOT MARKED</b> <b>WATER TABLE</b>			<b>LC 107-2 (10) 11:57</b>
			<b>ENTER OVERBURDEN HAZARD TRAIL</b> <b>OUTWASH SANDS - GRAVEL</b> <b>CLAYMAYAS ARE TO 60% (TILL?)</b> <b>SANDY - SANDY GRAVEL</b> <b>GRAVEL - SANDY GRAVEL</b>			<b>LC 107-3 (15)</b>
			<b>GRAVELLY CLAY (LOOSE)</b> <b>CLAY TO 60% (TILL)</b>			<b>LC 107-4 (20)</b>
			<b>SANDY GRAVEL 75% FINE/CLAY</b> <b>20% SAND</b> <b>5% SILT/CLAY</b>			<b>LC 107-5 (25)</b>
						<b>LC 107-6 (30)</b>
						<b>LC 107-7 (35)</b>
						<b>LC 107-8 (40)</b>
			<b>GRAY SAND LOOSE BOUNDED BY</b> <b>TILL OR GRAVELS - 20-30% FINE</b> <b>60% SAND</b> <b>10% FINE</b>			<b>LC 107-9 (45)</b>
			<b>MEDIUM SANDY GRAVEL FINE GRAVEL</b> <b>10-20% FINE CLAY</b> <b>(OUTWASH GRAVELS)</b>			<b>LC 107-10 (50)</b>
			<b>SANDY GRAVELS TO</b> <b>GRAVELLY SANDS</b>			<b>LC 107-11 (55)</b>
			<b>FINE/CLAY FINE-GRAN SAND</b> <b>FINE - SORTED - SANDY GRAVEL</b> <b>20-30% FINE SAND</b> <b>40-60% FINE SAND</b> <b>20-30% FINE SAND</b>			<b>LC 107-12 (60)</b>
						<b>LC 107-13 (65)</b>
						<b>LC 107-14 (70)</b>
						<b>LC 107-15 (75)</b>
			<b>SANDY GRAVELS</b>			<b>24 JUL 91 LC 107-16 (80)</b>
						<b>LC 107-17 (85)</b>
			<b>GRAVELLY SANDS - FINE-GRAN</b> <b>SORTED - SANDY GRAVEL</b> <b>SAND. 15% FINE CLAY</b> <b>60-70% SAND</b> <b>10-20% FINE/CLAY</b>			<b>LC 107-18 (90)</b>
						<b>LC 107-19 (95)</b>
						<b>F.O. 99 ft (LC 107-20 (99))</b>

J4-37

DRILLING LOG		DIVISION		INSTALLATION		HOLE NO.	
PROJECT		North Pacific		Seattle District		LC-100	
Fort Lewis Logistics Center						SHEET 1 OF 1 SHEETS	
LOCATION (Continent or Island)				12. SIZE AND TYPE OF BIT		13. BITUM FOR ELEVATION (METER OR FEET)	
1. DRILLING AGENCY		Chicago Pneumatic		14. MANUFACTURER'S DESIGNATION OF DRILL		WS-650	
2. HOLE NO. (The number on drawing must be the same)		LC-108		15. TOTAL NO. OF OVER-BORER SAMPLES TAKEN		16. TOTAL NUMBER CORE BOXES	
3. NAME OF DRILLER		Mike Learn		17. ELEVATION GROUND WATER		N/A	
4. DIRECTION OF HOLE		<input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		18. DATE HOLE STARTED		7/25/91	
5. THICKNESS OF OVERBURDEN				19. ELEVATION TOP OF HOLE		7/25/91	
6. DEPTH DRILLED INTO ROCK				20. TOTAL CORE RECOVERY FOR BORING		N/A	
7. TOTAL DEPTH OF HOLE		98 ft		21. SIGNATURE OF INSPECTOR		C. H. Carter	
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Including core, water level, depth of penetration, etc., if applicable)	
0	0	0-0	RECENT - brn soil + cobbles				
10	10	0	STENACOOM GRAVEL (?) no distinct contact with outwash Gravel 70% pebbles and cobbles 5% granules sand 15% silt 15%			LC-108 5	
20	20	0	Outwash Gravel Gravel 75% sand+silt 25% rock is 75% 85% volcanics lattice to andesite; dk. gray, blk. and gray/green; aphanitic and porphyritic; 90% of intermediate volcanics are altered to greenish-brown feldspar; 5-10% of rock is porphyritic Feldspar altered intrusives are granite to monzonite, basaltic to chlor in occasional rocks			LC-108 10	
30	30	0	sand content gradually decreases to <10% and silt to <5% <2% quartzite pebbles			LC-108 15	
40	40	0				LC-108 20	
50	50	0				LC-108 25	
60	60	0				LC-108 30	
70	70	0				LC-108 35	
80	80	0				LC-108 40	
90	90	0				LC-108 45	
100	100	0				LC-108 50	
110	110	0				LC-108 55	
120	120	0				LC-108 60	
130	130	0				LC-108 65	
140	140	0				LC-108 70	
150	150	0				LC-108 75	
160	160	0				LC-108 80	
170	170	0				LC-108 85	
180	180	0				LC-108 90	
190	190	0				LC-108 95	
200	200	0				LC-108 98	
				TD = 98'			

J4-38

## SUMMARY LOG

Hole No. LC-133

DRILLING LOG		DIVISION North Pacific		INSTALLATION SEATTLE DISTRICT		SHEET 1 OF 1 SHEETS	
1. PROJECT Ft. LEWIS LOG. MTR				10. SIZE AND TYPE OF BIT 6" ID HSA			
2. LOCATION (Coordinates of Station) N: 652242.9837 E: 1496450.8636				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) NGVD 29			
3. DRILLING AGENCY Soil Sampling Service				12. MANUFACTURER'S DESIGNATION OF DRILL Mobile B61			
4. HOLE NO. (As shown on drawing title and file number) LC-133				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 11 UNDISTURBED 0	
5. NAME OF DRILLER George Jewell				14. TOTAL NUMBER CORE BOXES NA		15. ELEVATION GROUND WATER 264.66	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				16. DATE HOLE STARTED 8-13-92 COMPLETED 8-13-92		17. ELEVATION TOP OF HOLE 280.09	
7. THICKNESS OF OVERBURDEN NA				18. TOTAL CORE RECOVERY FOR BORING NA %			
8. DEPTH DRILLED INTO ROCK NA				19. SIGNATURE OF INSPECTOR A.E. Long, Jr.			
9. TOTAL DEPTH OF HOLE 38.5'							
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
	10		BROWN, WELL GRADED GRAVEL (GW), LOOSE, DM, SUBANGULAR W/ RUBBLES (STEILACOOM GRAVEL)		LC-133 S-1	5-5' GRAB SAMPLE	
	10				LC-133 S-2	5-10' GRAB SAMPLE	
	20				LC-133 S-3	13-14.5' SPT 51/5134	
	20				LC-133 S-4	18-18.6' SPT 27/50-3.5"	
	30				LC-133 S-5	23-23.6' SPT 40/50-5.75"	
			WASH TILL?				
			BROWN - GRAY, POORLY GRADED GRAVEL (GP) MED DENSE, MOIST, SUBANGULAR GRAVEL 1-2" IN Ø (GLACIAL OUTWASH GRAVEL)		LC-133 S-6	SPT REFUSAL	
					LC-133 S-7	GRAB SAMPLE	
					LC-133 S-8	EST. SAMPLE 28.5-30'	
					LC-133 S-9	SPT REFUSAL	
					LC-133 S-10	GRAB SAMPLE	
			BROWN, WELL GRADED SAND (SW-SA) (TILL) 4.75'		LC-133 S-10	EST. SAMPLE 33.2-35' SPT 38-38.5'	
			TOTAL DEPTH 38.5'			REFUSAL 50-4.75'	
			8-13-92			WATER LEVEL 8-18-92 12.5'	

Hole No. LC-1341

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	10		<p>Tan Brown gray to Black Poorly graded gravel w/ sand (GP) - estimated amounts var</p> <p>well graded sand w/ gravel (SW)</p>		<p>#1 LC 134</p> <p>#2 LC 134</p> <p>#3 LC 134</p>	
	20		<p>Poorly graded gravel w/ sand (GP)</p> <p>Silty clayey sand (SC-SM)</p>		<p>#4 Drive Sample LC 134</p> <p>#5 Drive Sample LC 134</p>	
	30		<p>Bit @ 28' T.D.</p> <p><b>NC</b></p>			<p>#6 Drive Sample 10" Below Bit</p>



## SUMMARY LOG

Hole No. LC-135

DRILLING LOG		DIVISION North Pacific		INSTALLATION SEATTLE DISTRICT		SHEET OF 1 SHEETS		
1. PROJECT Ft. Lewis Logistics Center				10. SIZE AND TYPE OF BIT 6" H.S.G.				
2. LOCATION (Coordinates or Station) N: 652625.2059 E: 1496727.3550				11. DATUM FOR ELEVATION THORN (TBM or MSL) NGVD 29				
3. DRILLING AGENCY Soil Sampling Service				12. MANUFACTURER'S DESIGNATION OF DRILL Mobile B-61				
4. HOLE NO. (As shown on drawing title and file number) LC-135				13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN 8		UNDISTURBED 0		
5. NAME OF DRILLER George Jewell				14. TOTAL NUMBER CORE BOXES 0				
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER 264.59				
7. THICKNESS OF OVERBURDEN NA				16. DATE HOLE STARTED 8/25/92 COMPLETED 8/24/92				
8. DEPTH DRILLED INTO ROCK NA				17. ELEVATION TOP OF HOLE 289.30				
9. TOTAL DEPTH OF HOLE 37.5'				18. TOTAL CORE RECOVERY FOR BORING NA				
				19. SIGNATURE OF INSPECTOR Gerry Drayton				
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	SCORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g		
	0.0	0.0	Tan Brown to Black well graded gravel with sand (GW) coarse & moist.			#1 LC-135	3-5'	
	0.0	0.0				#2 LC-135	5-10'	
	0.0	0.0				#3 LC-135	10-15'	
	0.0	0.0				#4 LC-135	15' No Recovery	
	0.0	0.0				#5 LC-135	20-22.5' No Recovery	
	0.0	0.0				#6 LC-135	22-25'	
	0.0	0.0		Tan, Green Brown to Black poorly graded gravel - sand (GA) coarse & wet			#7 LC-135	23-24' No Recovery
	0.0	0.0					#8 LC-135	26-27.5'
	0.0	0.0		Grey Silty Sand (SM) very fine grain				

Hole No. LC-136 A

Hole No. LC-136 A

DRILLING LOG		DIVISION North Pacific		INSTALLATION Seattle District		SHEET 1 OF 1 SHEETS	
1. PROJECT Ft. Lewis Logistics Center				10. SIZE AND TYPE OF BIT 6" H.S.C.			
2. LOCATION (Coordinates or Station) N: 652476.1685 E: 1496351.8967				11. DATUM FOR ELEVATION SHOWN (FSM or MSL) NGVD 29			
3. DRILLING AGENCY Soil Sampling Service				12. MANUFACTURER'S DESIGNATION OF DRILL Mobile B-C1			
4. HOLE NO. (As shown on drawing title and file number) LC 136a				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 9		UNDISTURBED 0	
5. NAME OF DRILLER George Jewell				14. TOTAL NUMBER CORE BOXES 0		15. ELEVATION GROUND WATER 264.18	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				16. DATE MOLE 8/2/92		COMPLETED 8/11/92	
7. THICKNESS OF OVERBURDEN NA				17. ELEVATION TOP OF HOLE 277.65			
8. DEPTH DRILLED INTO ROCK NA				18. TOTAL CORE RECOVERY FOR BORING NA			
9. TOTAL DEPTH OF HOLE 43'				19. SIGNATURE OF INSPECTOR Gary Brannon			
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
	0	0.0					
	10	0.0	Tan green brown to black well-sorted gravel w/ sand (GW) loose, moist				#1 LC-136a 3-5'
	20	0.0	Tan, red, brown to black with graded sand w/ gravel (SW) loose wet				#2 LC-136a 8-10'
	30	0.0	Tan, green, brown to black poorly graded gravel w/ sand (GP) loose, wet, med. to fine grain				#3 LC-136a 13-15'
	40	0.0					#4 LC-136a 18-19.5'
	50	0.0					#5 LC-136a 23-24.5'
	60	0.0					#6 LC-136a 25-26.5'
	70	0.0					#7 LC-136a 27-27.5' no recovery
	80	0.0					#8 LC-136a 28-29.5' no recovery
	90	0.0					
	100	0.0					
	110	0.0					
	120	0.0					
	130	0.0					
	140	0.0					
	150	0.0					
	160	0.0					
	170	0.0					
	180	0.0					
	190	0.0					
	200	0.0					
	210	0.0					
	220	0.0					
	230	0.0					
	240	0.0					
	250	0.0					
	260	0.0					
	270	0.0					
	280	0.0					
	290	0.0					
	300	0.0					
	310	0.0					
	320	0.0					
	330	0.0					
	340	0.0					
	350	0.0					
	360	0.0					
	370	0.0					
	380	0.0					
	390	0.0					
	400	0.0					
	410	0.0					
	420	0.0					
	430	0.0					
	440	0.0					
	450	0.0					
	460	0.0					
	470	0.0					
	480	0.0					
	490	0.0					
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	510	0.0					
	520	0.0					
	530	0.0					
	540	0.0					
	550	0.0					

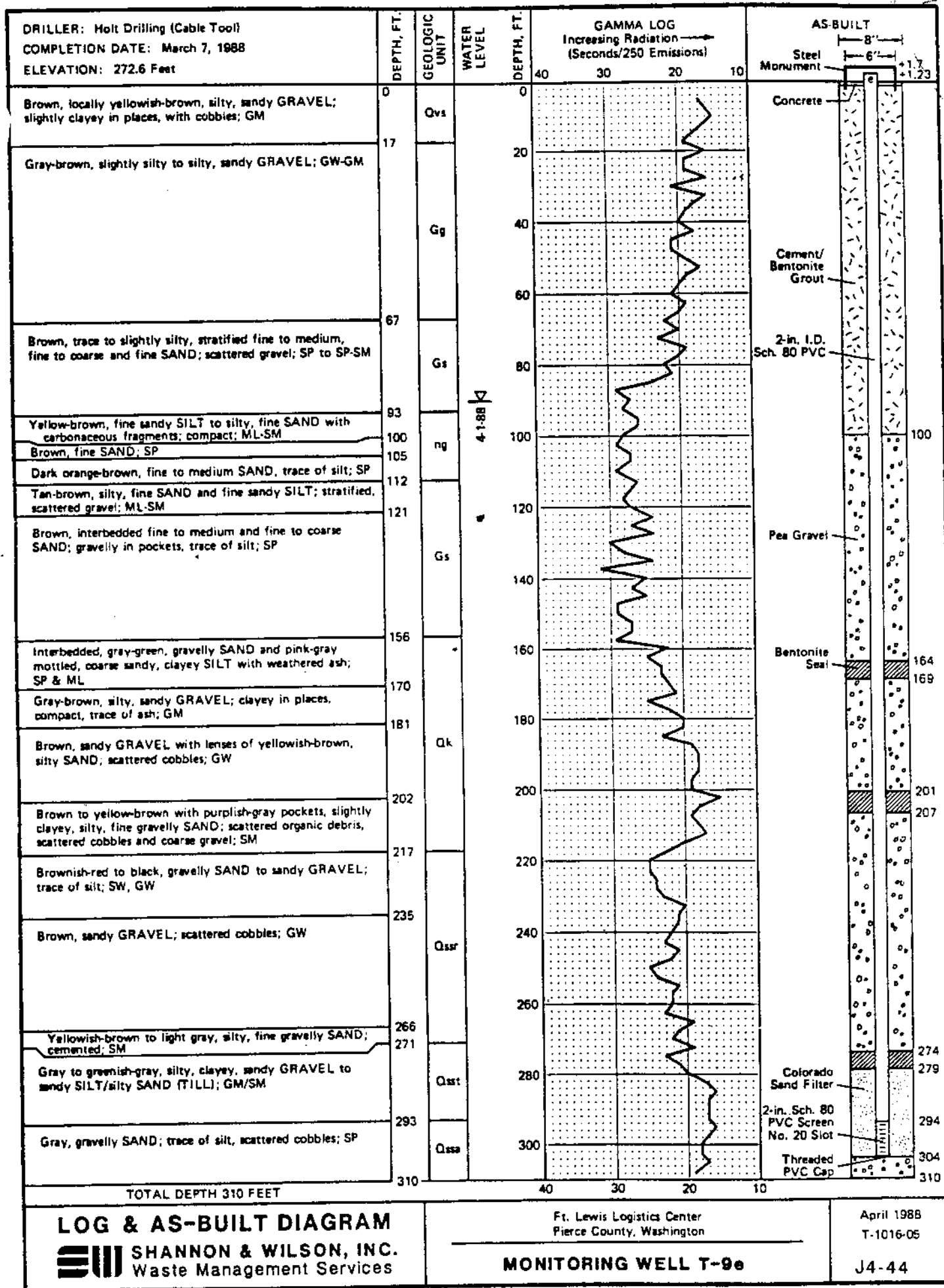
Summary Log

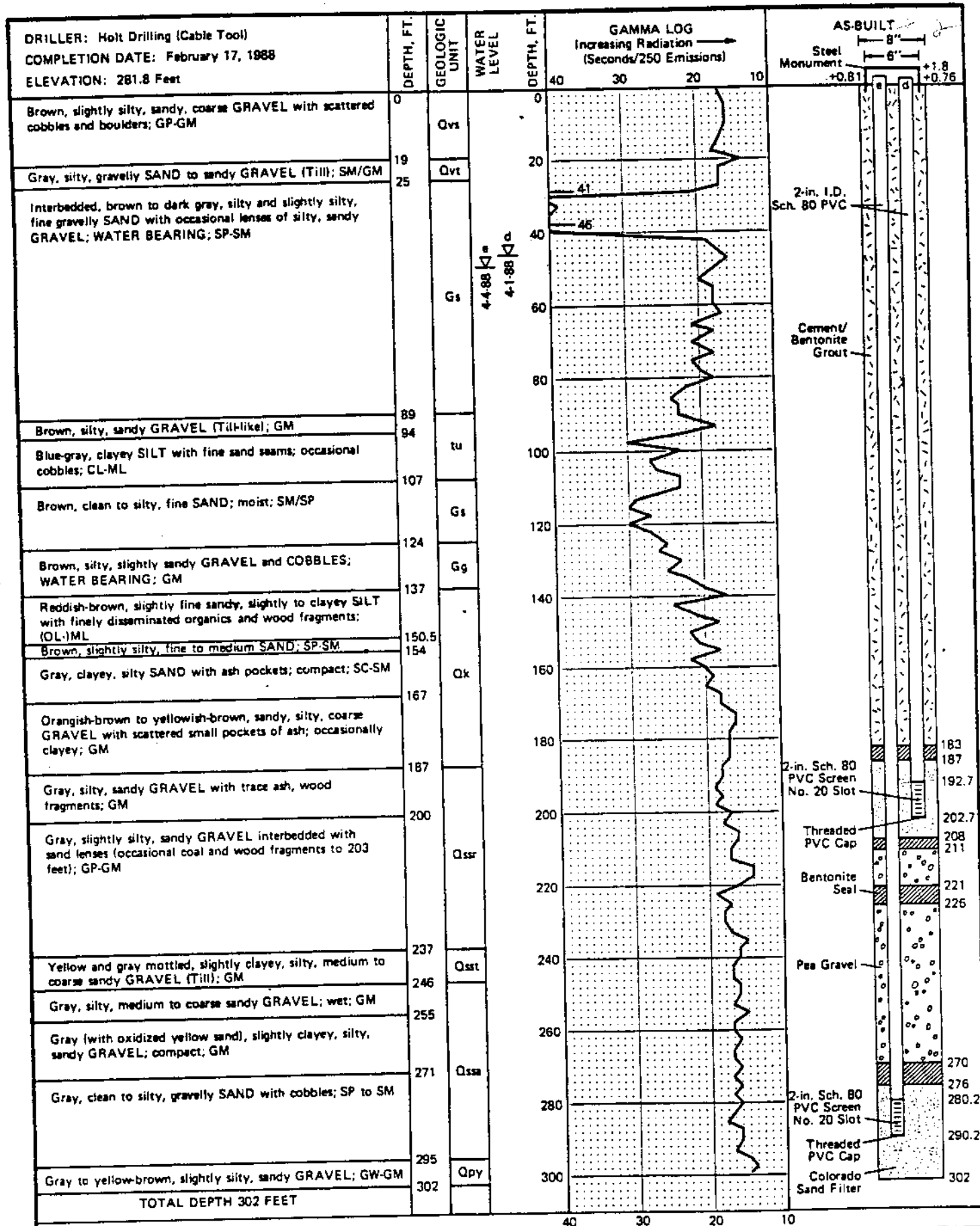
Hole No. LC-136 B

DRILLING LOG		DIVISION North Pacific	INSTALLATION SEATTLE DISTRICT	SHEET 1 OF 1 SHEETS
1. PROJECT FT. LEWIS LOGISTICS CENTER		10. SIZE AND TYPE OF BIT 6" I.D. HSA		
2. LOCATION (Coordinates or Station) N: 652485.8931 E: 1496354.8691		11. DATUM FOR ELEVATION SHOWN (TBM = MSL) NGVD 29		
3. DRILLING AGENCY Soil Sampling Service		12. MANUFACTURER'S DESIGNATION OF DRILL MOBILE 361		
4. HOLE NO. (As shown on drawing title and file number) LC-136 B		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 14		UNDISTURBED 0
5. NAME OF DRILLER GEORGE JEWELL		14. TOTAL NUMBER CORE BOXES 0		15. ELEVATION GROUND WATER 264.65
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		16. DATE HOLE STARTED 9/10/92 COMPLETED 9/14/92		17. ELEVATION TOP OF HOLE 277.66
7. THICKNESS OF OVERBURDEN NA		18. TOTAL CORE RECOVERY FOR BORING NA		
8. DEPTH DRILLED INTO ROCK NA		19. SIGNATURE OF INSPECTOR EADY BROWN		
9. TOTAL DEPTH OF HOLE 75'				

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0.0	0.0	Tan Brown Green to Black well graded gravel w/ sand (GW)		#1 LC-136-b 3-5'	
	0.0	0.0			#2 LC-136-b 5-10'	
	10.0	0.0			#3 LC-136-b 13-15'	
	20.0	0.0			#4 LC-136-b 18-20'	
	30.0	0.0			#5 LC-136-b 23-25'	
	40.0	0.0			#6 LC-136-b 25-30'	
	50.0	0.0			#7 LC-136-b 33-35'	
	60.0	0.0			#8 LC-136-b 38-40'	
	70.0	0.0			#9 LC-136-b 43-43.5'	
	80.0	0.0			#10 LC-136-b 50-50.75'	
	90.0	0.0			#11 LC-136-b 55.0-55.75'	
	100.0	0.0			#12 LC-136-b 60-60.75'	
	110.0	0.0			#13 LC-136-b 65-65.75'	
	120.0	0.0			#14 LC-136-b 73-73.25'	
	130.0	0.0				
	140.0	0.0				
	150.0	0.0				
	160.0	0.0				
	170.0	0.0				
	180.0	0.0				
	190.0	0.0				
	200.0	0.0				
	210.0	0.0				
	220.0	0.0				
	230.0	0.0				
	240.0	0.0				
	250.0	0.0				
	260.0	0.0				
	270.0	0.0				
	280.0	0.0				
	290.0	0.0				
	300.0	0.0				
	310.0	0.0				
	320.0	0.0				
	330.0	0.0				
	340.0	0.0				
	350.0	0.0				
	360.0	0.0				
	370.0	0.0				
	380.0	0.0				
	390.0	0.0				
	400.0	0.0				
	410.0	0.0				
	420.0	0.0				
	430.0	0.0				
	440.0	0.0				
	450.0	0.0				
	460.0	0.0				
	470.0	0.0				
	480.0	0.0				
	490.0	0.0				
	500.0	0.0				
	510.0	0.0				
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	710.0	0.0				
	720.0	0.0				
	730.0	0.0				
	740.0	0.0				
	750.0	0.0				
	760.0	0.0				
	770.0	0.0				
	780.0	0.0				
	790.0	0.0				
	800.0	0.0				
	810.0	0.0				
	820.0	0.0				
	830.0	0.0				
	840.0	0.0				
	850.0	0.0				
	860.0	0.0				
	870.0	0.0				
	880.0	0.0				
	890.0	0.0				
	900.0	0.0				
	910.0	0.0				
	920.0	0.0				
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	950.0	0.0				
	960.0	0.0				
	970.0	0.0				
	980.0	0.0				
	990.0	0.0				
	1000.0	0.0				

T.D. 75'





**LOG & AS-BUILT DIAGRAM**  
 **SHANNON & WILSON, INC.**  
 Waste Management Services

Ft. Lewis Logistics Center  
 Pierce County, Washington

**MONITORING WELL LC-41d/e**

April 1988  
 T-1016-05

J4-45

DRILLING LOG		DIVISION		INSTALLATION		SHEET	
		CENPS-EN-GT-GE		Fort Lewis		OF 2 SHEETS	
1. PROJECT Logistics Center				10. SIZE AND TYPE OF BIT 8" button + 8" tri-car			
2. LOCATION (Coordinates or Station) NE 1/4, SW 1/4, Sec 20, T19N, R2E W.M.				11. DATUM FOR ELEVATION SHOWN (TBM or MSL)			
3. DRILLING AGENCY Soil Sampling Service				12. MANUFACTURER'S DESIGNATION OF DRILL IR TH-60 Air rotary			
4. HOLE NO. (As shown on drawing title and file number) LC-166D				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED 0 UNDISTURBED 0			
5. NAME OF DRILLER Chuck Ketvirtis				14. TOTAL NUMBER CORE BOXES			
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER 16' 11" below ground			
7. THICKNESS OF OVERBURDEN				16. DATE HOLE STARTED 7-17-95 COMPLETED 7-24-95			
8. DEPTH DRILLED INTO ROCK				17. ELEVATION TOP OF HOLE 250 (from map)			
9. TOTAL DEPTH OF HOLE 188 ft				18. TOTAL CORE RECOVERY FOR BORING 3			
				19. SIGNATURE OF INSPECTOR Richard E Smith			
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
			Silty, sandy gravel, brown, loose.		Steilacoon		
	10	GP-6M			Gravel and Vashon outwash		8"
	20						4"
	25.0'						
	30						
	40	GM	Silty sandy gravel, brown.		Vashon Till		
	50						
	60	GP	Sandy gravel, grey		Vashon outwash		
	70	SP	Gravelly sand, grey-brown				
	80	GP	Silty sandy gravel, light brown		non-glacial		
	90	GP	Sandy gravel, cobbles and boulders.		Narrow		
	100	GP	Sandy gravel		glacial		

DRILLING LOG (Cont Sheet)				ELEVATION TOP OF HOLE		Hole No. LC-166D	
PROJECT Logistics Center			INSTALLATION Fort Lewis			SHEET Z OF 2 SHEETS	
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
	100						
	110	SP	Gravelly sand, grey-brown SP-SC near bottom.				
	120	GP-6C	Clayey sandy gravel, grey				
	130						
	140	GP	Sandy gravel, grey				
	150	GP-6C	Clayey, sandy gravel, red brown Kitsap?				
	160	GP	Sandy gravel with minor light brown silt. Abundant water				
	170	SP	Gravelly sand, grey and minor grey silt. Water Kitsap?				
	180	SP	Fine and medium sand, dark green to black and minor light brown silt, water. Salmon Springs outwash?				
	190	GP	Sandy gravel, water.				
	200	SP	Fine and medium sand, brown water				
	210	SM	Silty, fine sand, little water.				
	220		Total Depth = 188 ft.				

J4-47

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Attachment J5

TECHNICAL SPECIFICATIONS

TABLE OF CONTENTS

Section No.	Section Title
01140	Supplementary Requirements
01145	Site Specific Requirements
01270	Measurement and Payment
01330	Submittal of Contract Data
01410	Environmental Protection
02211	Sonic Core Drilling and Monitoring Well Installation

END OF CONTENTS

01022  
Sonic Drilling for Soil Borings and Monitoring Well Installation,  
Fort Lewis, Washington

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## SECTION 01140

### SUPPLEMENTARY REQUIREMENTS

#### 1.1 CORRESPONDENCE

1.1.1 All correspondence shall be addressed to the Contracting Officers Representative (COR), shall be serially numbered commencing with Number 1, with no numbers missing or duplicated and shall be furnished with an original and one copy. Enclosures attached or transmitted with the correspondence shall also be furnished with an original and one copy. Each serial letter shall make reference to the contract name, contract number and shall have only one subject.

1.1.2 All correspondence from the COR will be also serially numbered with no numbers missing or duplicated. Letters to the Contractor will be forwarded in duplicate.

#### 1.2 IDENTIFICATION OF EMPLOYEES AND MILITARY REGULATIONS

(a) The Contractor shall be responsible for compliance with all regulations and orders of the Commanding Officer of the Military Installation, respecting identification of employees, movements on installation, parking, truck entry, and all other military regulations which may affect the work.

(b) The work under this Contract is to be performed at an operating Military Installation with consequent restrictions on entry and movement of nonmilitary personnel and equipment.

(c) The Commanding Officer of Fort Lewis, Washington, has initiated the following specific requirement regarding vehicle registration for this contract.

Contractors performing work on Fort Lewis shall, after award, register all vehicles to be used on the installation with the Vehicle Registration Section of the Law Enforcement Command. Contractor employees entering the installation in privately owned vehicles (POVs) shall also register their vehicles. A copy of contract award, proof of liability insurance, current driver's license and state vehicle registration shall be required to register Contractor, subcontractor, and employee vehicles.

Upon completion of the contract, it shall be the prime contractor's responsibility to collect all vehicle decals issued under the contract including those issued to employees and subcontractors. Decals are to be carefully removed from the vehicle, placed in an envelope and attached to the original documentation (i.e., post vehicle registration document) received with the decal. Decals, with documentation, must be returned to Vehicle Registration, Building 5236. Proof of decal clearance for all vehicles registered under this contract will be issued to the prime contractor and shall be returned to the Contracting Officer prior to final payment.

01022

Sonic Drilling for Soil Borings and Monitoring Well Installation,  
Fort Lewis, Washington

In the event of contract extension, it shall be the prime contractor's responsibility to report time extension to Vehicle Registration, with evidence of same. For further information, contact Vehicle Registration, Building 5236 (Telephone: (206) 967-7668), Fort Lewis, Washington 98433-5000.

END OF SECTION



## SECTION 01145

### SITE SPECIFIC REQUIREMENTS

#### 1.1 SANITARY PROVISIONS, WATER AND ELECTRICITY

All required electric current shall be furnished by the Contractor. No water is available at any of the drilling sites. Responsibility shall be upon Contractor to provide water from a potable source at the Contractor's own expense. Contractor shall provide a portable toilet at the site during all drilling and well installation activities and shall maintain same in a neat and sanitary condition. Such accommodations shall comply with requirements and regulations of EM 385-1-1, and state health department, local ordinances, and other authorities having jurisdiction.

#### 1.2 COOPERATION WITH OTHERS

The Government may have other contractors in the same area in which the work is being performed. These contractors may or may not be involved with the drilling/monitoring well installation program. The Contractor, in the best interest of the Government, shall provide all necessary cooperation so that the concurrent work of other contractors is not unduly disrupted by the drilling work of this contract. The Contracting Officer shall be the sole judge concerning satisfactory cooperation among contractors, as such the decision of the Contracting Officer shall prevail.

#### 1.3 STAGING AREA

Contractor will be provided adequate open staging area as directed by the Government. Area is unsecured, and Contractor shall make provisions for its own security.

Contractor shall be responsible for keeping staging area, area clean. All loose debris and material subject to being moved by prevailing winds in the area shall be picked up or secured at all times.

If the area is not maintained in a safe and clean condition as defined above the Government may have the area cleaned by others with the costs being deducted from the contractor's payment.

#### 1.4 DIGGING PERMIT

Before performing any onsite drilling, Contractor shall obtain a digging permit for underground utility clearance. The digging permit can be obtained at Directorate of Public Works, Building 2012, room 110, telephone 253-967-5237, on weekdays between 8 a.m. and 3:30 p.m. Typically it will take a Contractor 1-2 working days to collect all signatures necessary for clearances prior to the permit being issued.

END OF SECTION

01022  
Sonic Drilling for Soil Borings and Monitoring Well Installation,  
Fort Lewis, Washington

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## SECTION 01270

### MEASUREMENT AND PAYMENT

#### PART 1 GENERAL

##### 1.1 GENERAL

The contract price for each item shall constitute full compensation for furnishing all plant, labor, materials, and incidentals, and performing all operations necessary to core drill by sonic drilling methods and install and complete the items in accordance with the specifications. Payment for each item shall be considered as full compensation, notwithstanding that minor features may not be specifically mentioned herein. Materials and work paid for under one item will not be paid for under any other item except for Item: Upgrade to Personal Protection Level C which will be in addition to other work. When submitting invoices for payment, all fractional quantities shall be rounded to the nearest whole unit. The Contractor will not be compensated for loss of time or equipment due to breakdown of equipment, lack of proper equipment as determined by the Contracting Officer, labor shortages or disputes, delay in obtaining materials, or for any other reason not directly the fault of the Government. Items for which no separate payment is provided shall be considered as incidental to the performance of the work with which it is mentioned.

##### 1.2 MEASUREMENT

Measurement of the units of work shall be made as hereinafter specified.

1.2.1 Linear Feet (LF): Measurement by linear feet will be measured for payment to the nearest linear foot. Depth, installation, well casing, and well screen shall be measured by linear distance. Measurement of well depth shall be vertical measurement in linear feet (LF) from original ground surface.

1.2.2 Hour (HR): Measurement by the hour will be to the nearest whole hour. Upgrade personal protection to Level C work will be measured by the number of hours that a crew is required due to adverse air monitoring to operate under Level C requirements. Measurement will be to the nearest hour and applies to drill crew working under Level C. The time necessary to wait for grout to set will not be measured for payment.

##### 1.3 DESCRIPTION OF CONTRACT LINE ITEMS

###### 1.3.1 Item 0001 (BASE)

Payment for "Sonic Drilling With Continuous Coring And Installation Of Monitoring Wells In Selected Soil Borings of Upper Aquifer (East Gate Disposal Yard, wells not to exceed 120 feet depth), Fort Lewis, WA In Accordance With The Scope Of Work, Drawings, And All Provisions Herein. Contractor Shall Furnish All Labor, Materials, And Equipment As Specified" will be made under the various contract lump sum and unit prices for subitems 0001AA through 0001AI. Payment will be made only for drilling and testing those holes as directed by the Contracting Officer's Representative (COR) to be so drilled. Payment will not be

made for any hole or testing for which satisfactory records (and sample s), as determined by the COR, are not furnished.

#### 1.3.1.1 Item No. 0001AA, Mobilization and Demobilization

Payment will be made at the contract lump sum price for Item: Mobilization and Demobilization, payment of which shall constitute full compensation for preparation of and furnishing submittals and transportation of all plant, material, equipment, and supplies to and from the site of work. Sixty percent of Item: Mobilization and Demobilization will be paid following completion of mobilization to the work area, including furnishing complete assembly in working order of all equipment necessary to perform the required sonic core drilling and monitoring well installation. The remaining 40 percent of Item: Mobilization and Demobilization will be paid when all equipment has been removed from the area, cleanup accomplished to the satisfaction of the Contracting Officer, and demobilization is complete. No separate payment will be made for moves between holes.

#### 1.3.1.2 Item No. 0001AB, Sonic Drill Rig Rental and Crew

Payment will be made at the contract unit price for Item: Sonic Drill Rig Rental and Crew, payment of which shall be full compensation for all equipment, labor, materials, supplies, and incidental costs to core drill approximately twenty four (24) borings each not to exceed 120 feet depth below ground surface. Labor includes, but is not limited to decontamination of equipment, core drilling of soil borings, collection of core, temporary storage of cores, and standby time of equipment and crew caused by Government personnel. Equipment includes, but is not limited to decontamination equipment, sonic drill rig, water truck, and temporary security fencing as necessary to secure the work area. Materials and supplies shall include a temporary covered shelter for protection and dry storage of core samples. Shelter shall be at least 7 feet in height and may be constructed of a combination of wood and tarpaulins. The furnishing, installing, removing and disposal of ground protection materials will be incidental to this item of work. The Contractor shall be responsible for transporting all IDW to a centrally located area in the EGDY to be designated by a Government representative. Soil IDW will be piled on the ground surface and covered with visqueen. Liquid IDW will be placed in a Government-furnished Baker Tank.

#### 1.3.1.3 Item No. 0001AC, Decommission Soil Borings

Payment will be made at the contract unit price for Item: Decommission Soil Borings, payment of which shall constitute full compensation for furnishing all plant, labor, sealant material, equipment, supplies, and performing all work necessary to decommission all soil borings not converted to monitoring wells. Furnishing of potable water for decommissioning borings will be incidental to this item of work.

#### 1.3.1.4 Item No. 0001AD, Install 4 Shallow PVC Monitoring Wells, each approximately 25 feet depth.

Payment will be made at the contract unit price for Item: Install 4 Shallow PVC Monitoring Wells, each approximately 25 feet depth, payment of which shall be full compensation for furnishing all plant, labor, materials, equipment (including drill rig rental), supplies, start card from Washington State Department of Ecology (WADOE), and providing all work to install monitoring well materials as specified. The furnishing and installing of concrete pad, four guard posts, metal protection casing, watertight lockable security plug for the PVC well casing, commercially manufactured locking cover, and the WADOE well identification

tag shall be incidental to each monitoring well installed. No payment will be made for monitoring wells decommissioned due to installation practices not in accordance with this specification.

1.3.1.5 Item No. 0001AE, Install 4 PVC Monitoring Wells, each not to exceed 40 feet depth.

Payment will be made at the contract unit price for Item: Install 4 PVC Monitoring Wells, each not to exceed 40 feet depth, payment of which shall be full compensation for furnishing all plant, labor, materials, equipment (including drill rig rental), supplies, start card from Washington State Department of Ecology (WADOE), and providing all work to install monitoring well materials as specified. The furnishing and installing of concrete pad, four guard posts, metal protection casing, watertight lockable security plug for the PVC well casing, commercially manufactured locking cover, and the WADOE well identification tag shall be incidental to each monitoring well installed. No payment will be made for monitoring wells decommissioned due to installation practices not in accordance with this specification.

1.3.1.6 Item No. 0001AF, Install 11 each Upper Aquifer Multi-port Monitoring Wells, each not to exceed 120 feet depth.

Payment will be made at the contract unit price for Item: Install 11 each Upper Aquifer Multi-port Monitoring Wells, each not to exceed 120 feet depth, payment of which shall be full compensation for all furnishing all plant, labor, materials, equipment (including drill rig rental), supplies, start card from Washington State Department of Ecology (WADOE), and providing all work to install monitoring well materials as specified. Upper Aquifer multi-port monitoring wells shall be capable of accommodating a 3/8-inch outer diameter inertial-type pump tube and a thin-profile water level meter. The furnishing and installing of concrete pad, four guard posts, metal protection casing, commercially manufactured locking cover, and the WADOE well identification tag shall be incidental to each monitoring well installed. No payment will be made for monitoring wells decommissioned due to installation practices not in accordance with this specification.

1.3.1.7 Item No. 0001AG, Monitoring Well Development.

Payment will be made at the contract unit price for Item: Monitoring Well Development, payment of which shall be full compensation for furnishing the development rig and all equipment, labor, material and supplies for well development. Payment will be made only for the actual number of hours spent in developing the monitoring wells.

1.3.1.8 Item No. 0001AH, Standby Time, Equipment Only.

Payment will be made at the contract unit price for Item: Standby Time, Equipment Only, payment of which shall constitute full compensation for the standing by of Equipment Only when the Contracting Officer's Representative requests that the Contractor stop doing work on the project due to the Government's need to make decisions. No more than 8 hours of standby time will be paid during a calendar day (0001-2400 hours local time) and no more than 40 hours per week. Standby time will not be allowed during periods when the equipment would have otherwise been in idle status.

## 1.3.1.9 Item No. 0001AI, Upgrade to Personal Protection Level C.

Payment will be made at the contract unit price for Item: Upgrade to Personal Protection Level C, payment of which shall constitute full compensation for furnishing all plant, labor, materials, equipment and supplies to comply with Level C requirements. Furnishing of intrinsically safe outdoor fan(s) to ventilate the work site will be incidental to this item of work.

## 1.3.2 Item 0002 (BASE)

Payment for "Sonic Drilling With Continuous Coring And Installation Of Multi-port Monitoring Wells In Lower Aquifer (Wells not to exceed 300 feet depth), Fort Lewis, WA In Accordance With The Scope Of Work, Drawings, And All Provisions Herein. Contractor Shall Furnish All Labor, Materials, And Equipment As Specified" will be made under the various contract lump sum and unit prices for subitems 0002AA through 0002AD. Payment will be made only for drilling and testing those holes as directed by the Contracting Officer's Representative (COR) to be so drilled. Payment will not be made for any hole or testing for which satisfactory records (and samples), as determined by the COR, are not furnished.

## 1.3.2.1 Item No. 0002AA, Sonic Drill Rig Rental and Crew

Payment will be made at the contract unit price for Item: Sonic Drill Rig Rental and Crew, payment of which shall be full compensation for all equipment, labor, materials, supplies, and incidental costs to core drill approximately five (5) borings each not to exceed 300 feet depth below ground surface. Labor includes, but is not limited to decontamination of equipment, core drilling of soil borings, collection of core, temporary storage of cores, and standby time of equipment and crew caused by Government personnel. Equipment includes, but is not limited to decontamination equipment, sonic drill rig, water truck, and temporary security fencing as necessary to secure the work area. Materials and supplies shall include a temporary covered shelter for protection and dry storage of core samples. Shelter shall be at least 7 feet in height and may be constructed of a combination of wood and tarpaulins. The furnishing, installing, removing and disposal of ground protection materials will be incidental to this item of work. The Contractor shall be responsible for transporting all IDW to a centrally located area in the EGDY to be designated by a Government representative. Soil IDW will be piled on the ground surface and covered with visqueen. Liquid IDW will be placed in a Government-furnished Baker Tank.

## 1.3.2.2 Item No. 0002AB, Install 5 each Lower Aquifer Multi-port Monitoring Wells, each not to exceed 300 feet depth.

Payment will be made at the contract unit price for Item: Install 5 each Lower Aquifer Multi-port Monitoring Wells, each not to exceed 300 feet depth, payment of which shall be full compensation for all furnishing all plant, labor, materials, equipment (including drill rig rental), supplies, start card from Washington State Department of Ecology (WADOE), and providing all work to install monitoring well materials as specified. Lower Aquifer multi-port monitoring wells shall be capable of groundwater acquisition and water level measurement from each of the respective sampling ports. The furnishing and installing of concrete pad, four guard posts, metal protection casing, commercially manufactured locking cover, and the WADOE well identification tag shall be incidental to each monitoring well installed. No payment will be made for monitoring wells decommissioned due to installation practices not in accordance with this specification.

#### 1.3.2.3 Item No. 0002AC, Monitoring Well Development.

Payment will be made at the contract unit price for Item: Monitoring Well Development, payment of which shall be full compensation for furnishing the development rig and all equipment, labor, material and supplies for well development. Payment will be made only for the actual number of hours spent in developing the monitoring wells.

#### 1.3.2.4 Item No. 0002AD, Standby Time, Equipment Only.

Payment will be made at the contract unit price for Item: Standby Time, Equipment Only, payment of which shall constitute full compensation for the standing by of Equipment Only when the Contracting Officer's Representative requests that the Contractor stop doing work on the project due to the Government's need to make decisions. No more than 8 hours of standby time will be paid during a calendar day (0001-2400 hours local time) and no more than 40 hours per week. Standby time will not be allowed during periods when the equipment would have otherwise been in idle status.

#### 1.3.3 Item 0003 – Contract Data (Not Separately Priced)

No separate payment will be made for contract data and all costs in connection therewith shall be included in the contract unit or lump sum prices for the contract line item(s) to which the work pertains.

#### 1.3.4 Item 0004 (OPTIONAL)

Payment for "Additional Upper Aquifer Multi-port Monitoring Wells (Landfill 4)" will be made under the various contract lump sum and unit prices for subitems 0004AA through 0004AE. Payment will be made only for drilling and testing those holes as directed by the Contracting Officer's Representative (COR) to be so drilled. Payment will not be made for any hole or testing for which satisfactory records (and samples), as determined by the COR, are not furnished.

##### 1.3.4.1 Item No. 0004AA, Mobilization and Demobilization.

Payment will be made at the contract lump sum price for Item: Mobilization and Demobilization, payment of which shall constitute full compensation for preparation of and furnishing submittals and transportation of all plant, material, equipment, and supplies to and from the site of work. Sixty percent of Item: Mobilization and Demobilization will be paid following completion of mobilization to the work area, including furnishing complete assembly in working order of all equipment necessary to perform the required sonic core drilling and monitoring well installation. The remaining 40 percent of Item: Mobilization and Demobilization will be paid when all equipment has been removed from the area, cleanup accomplished to the satisfaction of the Contracting Officer, and demobilization is complete. Additional Mobilization and Demobilization will only be paid if the Contractor's equipment and crew are to be removed from the site at the Government's request for an extended period.

## 1.3.4.2 Item No. 0004AB, Sonic Drill Rig Rental and Crew.

Payment will be made at the contract unit price for Item: Sonic Drill Rig Rental and Crew, payment of which shall be full compensation for all equipment, labor, materials, supplies, and incidental costs to core drill approximately four (4) borings each not to exceed 120 feet depth below ground surface. Labor includes, but is not limited to decontamination of equipment, core drilling of soil borings, collection of core, temporary storage of cores, and standby time of equipment and crew caused by Government personnel. Equipment includes, but is not limited to decontamination equipment, sonic drill rig, water truck, and temporary security fencing as necessary to secure the work area. Materials and supplies shall include a temporary covered shelter for protection and dry storage of core samples. Shelter shall be at least 7 feet in height and may be constructed of a combination of wood and tarpaulins. The furnishing, installing, removing and disposal of ground protection materials will be incidental to this item of work. The Contractor shall be responsible for transporting all IDW to a centrally located area in the EGDY to be designated by a Government representative. Soil IDW will be piled on the ground surface and covered with visqueen. Liquid IDW will be placed in a Government-furnished Baker Tank.

## 1.3.4.3 Item No. 0004AC, Install 4 each Upper Aquifer Multi-port Monitoring Wells, each not to exceed 120 feet depth.

Payment will be made at the contract unit price for Item: Install 4 each Upper Aquifer Multi-port Monitoring Wells, each not to exceed 120 feet depth, payment of which shall be full compensation for all furnishing all plant, labor, materials, equipment (including drill rig rental), supplies, start card from Washington State Department of Ecology (WADOE), and providing all work to install monitoring well materials as specified. Upper Aquifer multi-port monitoring wells shall be capable of accommodating a 3/8-inch outer diameter inertial-type pump tube and a thin-profile water level meter. The furnishing and installing of concrete pad, four guard posts, metal protection casing, commercially manufactured locking cover, and the WADOE well identification tag shall be incidental to each monitoring well installed. No payment will be made for monitoring wells decommissioned due to installation practices not in accordance with this specification.

## 1.3.4.4 Item No. 0004AD, Monitoring Well Development.

Payment will be made at the contract unit price for Item: Monitoring Well Development, payment of which shall be full compensation for furnishing the development rig and all equipment, labor, material and supplies for well development. Payment will be made only for the actual number of hours spent in developing the monitoring wells.

## 1.3.4.5 Item No. 0004AE, Standby Time, Equipment Only.

Payment will be made at the contract unit price for Item: Standby Time, Equipment Only, payment of which shall constitute full compensation for the standing by of Equipment Only when the Contracting Officer's Representative requests that the Contractor stop doing work on the project due to the Government's need to make decisions. No more than 8 hours of standby time will be paid during a calendar day (0001-2400 hours local time) and no more than 40 hours per week. Standby time will not be allowed during periods when the equipment would have otherwise been in idle status.



### 1.3.5 Item 0005 (OPTIONAL)

Payment for “Additional Lower Aquifer Multi-port Monitoring Wells” will be made under the various contract lump sum and unit prices for subitems 0005AA through 0005AE. Payment will be made only for drilling and testing those holes as directed by the Contracting Officer’s Representative (COR) to be so drilled. Payment will not be made for any hole or testing for which satisfactory records (and samples), as determined by the COR, are not furnished.

#### 1.3.5.1 Item No. 0005AA, Mobilization and Demobilization.

Payment will be made at the contract lump sum price for Item: Mobilization and Demobilization, payment of which shall constitute full compensation for preparation of and furnishing submittals and transportation of all plant, material, equipment, and supplies to and from the site of work. Sixty percent of Item: Mobilization and Demobilization will be paid following completion of mobilization to the work area, including furnishing complete assembly in working order of all equipment necessary to perform the required sonic core drilling and monitoring well installation. The remaining 40 percent of Item: Mobilization and Demobilization will be paid when all equipment has been removed from the area, cleanup accomplished to the satisfaction of the Contracting Officer, and demobilization is complete. Additional Mobilization and Demobilization will only be paid if the Contractor’s equipment and crew are to be removed from the site at the Government’s request for an extended period.

#### 1.3.5.2 Item No. 0005AB, Sonic Drill Rig Rental and Crew.

Payment will be made at the contract unit price for Item: Sonic Drill Rig Rental and Crew, payment of which shall be full compensation for all equipment, labor, materials, supplies, and incidental costs to core drill approximately five (5) borings each not to exceed 300 feet depth below ground surface. Labor includes, but is not limited to decontamination of equipment, core drilling of soil borings, collection of core, temporary storage of cores, and standby time of equipment and crew caused by Government personnel. Equipment includes, but is not limited to decontamination equipment, sonic drill rig, water truck, and temporary security fencing as necessary to secure the work area. Materials and supplies shall include a temporary covered shelter for protection and dry storage of core samples. Shelter shall be at least 7 feet in height and may be constructed of a combination of wood and tarpaulins. The furnishing, installing, removing and disposal of ground protection materials will be incidental to this item of work. The Contractor shall be responsible for transporting all IDW to a centrally located area in the EGDY to be designated by a Government representative. Soil IDW will be piled on the ground surface and covered with visqueen. Liquid IDW will be placed in a Government-furnished Baker Tank.

#### 1.3.5.3 Item No. 0005AC, Install 5 each Lower Aquifer Multi-port Monitoring Wells, each not to exceed 300 feet depth.

Payment will be made at the contract unit price for Item: Install 5 each Lower Aquifer Multi-port Monitoring Wells, each not to exceed 300 feet depth, payment of which shall be full compensation for all furnishing all plant, labor, materials, equipment (including drill rig rental), supplies, start card from Washington State Department of Ecology (WADOE), and providing all work to install monitoring well materials as specified. Lower Aquifer multi-port monitoring wells shall be capable of groundwater acquisition and water level measurement from each of the respective sampling ports. The furnishing and

installing of concrete pad, four guard posts, metal protection casing, commercially manufactured locking cover, and the WADOE well identification tag shall be incidental to each monitoring well installed. No payment will be made for monitoring wells decommissioned due to installation practices not in accordance with this specification.

#### 1.3.5.4 Item No. 0005AD, Monitoring Well Development.

Payment will be made at the contract unit price for Item: Monitoring Well Development, payment of which shall be full compensation for furnishing the development rig and all equipment, labor, material and supplies for well development. Payment will be made only for the actual number of hours spent in developing the monitoring wells.

#### 1.3.5.5 Item No. 0005AE, Standby Time, Equipment Only.

Payment will be made at the contract unit price for Item: Standby Time, Equipment Only, payment of which shall constitute full compensation for the standing by of Equipment Only when the Contracting Officer's Representative requests that the Contractor stop doing work on the project due to the Government's need to make decisions. No more than 8 hours of standby time will be paid during a calendar day (0001-2400 hours local time) and no more than 40 hours per week. Standby time will not be allowed during periods when the equipment would have otherwise been in idle status.

#### 1.3.6 Item 0006 (OPTIONAL)

Payment for "Lower Aquifer Conventional Monitoring Wells" will be made under the various contract lump sum and unit prices for subitems 0006AA through 0006AD. Payment will be made only for drilling and testing those holes as directed by the Contracting Officer's Representative (COR) to be so drilled. Payment will not be made for any hole or testing for which satisfactory records (and samples), as determined by the COR, are not furnished.

##### 1.3.6.1 Item No. 0006AA, Mobilization and Demobilization.

Payment will be made at the contract lump sum price for Item: Mobilization and Demobilization, payment of which shall constitute full compensation for preparation of and furnishing submittals and transportation of all plant, material, equipment, and supplies to and from the site of work. Sixty percent of Item: Mobilization and Demobilization will be paid following completion of mobilization to the work area, including furnishing complete assembly in working order of all equipment necessary to perform the required sonic core drilling and monitoring well installation. The remaining 40 percent of Item: Mobilization and Demobilization will be paid when all equipment has been removed from the area, cleanup accomplished to the satisfaction of the Contracting Officer, and demobilization is complete. Additional Mobilization and Demobilization will only be paid if the Contractor's equipment and crew are to be removed from the site at the Government's request for an extended period.

### 1.3.6.2 Item No. 0006AB, Sonic Drill Rig Rental and Crew.

Payment will be made at the contract unit price for Item: Sonic Drill Rig Rental and Crew, payment of which shall be full compensation for all equipment, labor, materials, supplies, and incidental costs to core drill approximately eight (8) borings each not to exceed 300 feet depth below ground surface. Labor includes, but is not limited to decontamination of equipment, core drilling of soil borings, collection of core, temporary storage of cores, and standby time of equipment and crew caused by Government personnel. Equipment includes, but is not limited to decontamination equipment, sonic drill rig, water truck, and temporary security fencing as necessary to secure the work area. Materials and supplies shall include a temporary covered shelter for protection and dry storage of core samples. Shelter shall be at least 7 feet in height and may be constructed of a combination of wood and tarpaulins. The furnishing, installing, removing and disposal of ground protection materials will be incidental to this item of work. The Contractor shall be responsible for transporting all IDW to a centrally located area in the EGDY to be designated by a Government representative. Soil IDW will be piled on the ground surface and covered with visqueen. Liquid IDW will be placed in a Government-furnished Baker Tank.

### 1.3.6.3 Item No. 0006AC, Install 8 each Lower Aquifer Conventional Monitoring Wells, each not to exceed 300 feet depth.

Payment will be made at the contract unit price for Item: Install 8 each Lower Aquifer Conventional Monitoring Wells, each not to exceed 300 feet depth, payment of which shall be full compensation for furnishing all plant, labor, materials, equipment (including drill rig rental), supplies, start card from Washington State Department of Ecology (WADOE), and providing all work to install monitoring well materials as specified. The furnishing and installing of concrete pad, four guard posts, metal protection casing, watertight lockable security plug for the PVC well casing, commercially manufactured locking cover, and the WADOE well identification tag shall be incidental to each monitoring well installed. No payment will be made for monitoring wells decommissioned due to installation practices not in accordance with this specification.

### 1.3.6.4 Item No. 0006AD, Monitoring Well Development.

Payment will be made at the contract unit price for Item: Monitoring Well Development, payment of which shall be full compensation for furnishing the development rig and all equipment, labor, material and supplies for well development. Payment will be made only for the actual number of hours spent in developing the monitoring wells.

## 1.4 PAYMENT PROCEDURE

The Contractor will be paid upon submission of proper invoices or vouchers, the price(s) stipulated in Section B PRICES/COSTS SCHEDULE under the contract line item(s) for services rendered and accepted. Payment will be made in accordance with Section G, paragraph ADMINISTRATION PROCEDURES for all services satisfactorily performed during that period.

END OF SECTION

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## SECTION 01330

### SUBMITTAL OF CONTRACT DATA

#### PART 1 GENERAL

##### 1.1 CONTRACT DATA REQUIREMENTS LIST

The Contractor shall submit all items listed on the Contract Data Requirements List (CDRL) (DD Form 1423) included as an attachment under Section J ATTACHMENTS. Submittals required in the CONTRACT CLAUSES are in addition to those listed.

##### 1.2 DEFINITIONS

###### 1.2.1 Submittal

Items including product data and administrative submittals presented for review and approval or for information. Contract Clauses "FAR 52.236-5, Material and Workmanship," paragraph (b) apply to all "submittals."

##### 1.3 PREPARATION

###### 1.3.1 Marking

Permanent marking shall be provided on each submittal to identify it by contract number; transmittal date; Contractor's, Subcontractor's, and supplier's name, address(es) and telephone number(s); submittal name; specification or drawing reference; and similar information to distinguish it from other submittals. Submittal identification shall include space to receive the review action by the Contracting Officer.

###### 1.3.2 Data Format

Required data submittals for each specific material, product, unit of work, or system shall be collected into a single submittal and marked for choices, options, and portions applicable to the submittal. Marking of each copy of product data submitted shall be identical. Partial submittals will not be accepted for expedition of construction effort unless previously requested by COR.

###### 1.3.3 Drawing Format

- a. Detail drawings shall not be less than 8 1/2 by 11 inches nor more than 28 x 40 inches.
- b. 11 x 17 to 28 x 40 inches Drawing Size.

Include on each drawing a title block in lower right hand corner with a 3- by 4-inch clear area adjacent. Title block shall contain subcontractor's or fabricator's name, Contract number, drawing title, number, date,

bid item number, and a revision block. Contractor shall submit the required number of prints of any type. Provide a blank margin of 3/4 inch at bottom, 2 inches at left, and 1/2 inch at top and right.

c. Less than 11 x 17 inches Drawing Size.

Include on each drawing a title block with a 1-1/2 by 4-inch clear area adjacent. Title block shall contain subcontractor's or fabricator's name, Contract number, drawing title, number, date, bid item number, and a revision block. Contractor shall submit the required number of copies of any type. Provide a blank margin of 3/4 inch at all sides.

d. Dimension all drawings, except diagrams and schematic drawings; prepare drawings demonstrating interface with other trades to scale. Identify materials and products for work shown.

e. Where drawings are submitted for assemblies of more than one piece of equipment or systems of components dependent on each other for compatible characteristics, complete information shall be submitted on all such related components at the same time. Contractor shall insure that information is complete and that sequence of drawing submittal is such that all information is available for reviewing each drawing. Drawings for all items and equipment, of special manufacture or fabrication, shall consist of complete assembly and detail drawings.

f. All revisions after initial submittal shall be shown by number, date, and subject in revision block.

## 1.4 SUBMISSION REQUIREMENTS

### 1.4.1 Transmittal Form

Transmit submittals with transmittal form prescribed by Contracting Officer. The transmittal form shall identify project title, contract number, contractor, date of submittal and data item submitted.

### 1.4.2 Data and Drawing Submittals

When not indicated on the DD Form 1423, a minimum of three complete sets of data and drawings shall be submitted. One set, marked with review notations by the Contracting Officer, will be returned to the Contractor.

## 1.5 GOVERNMENT'S REVIEW

### 1.5.1 Review Notations

Submittals will be returned to the Contractor with the following notations:

a. Submittals marked "approved" authorize the Contractor to proceed with the work covered.

b. Submittals marked "approved as noted" authorize the Contractor to proceed with the work covered provided he takes no exception to the corrections. Notes shall be incorporated prior to submission of the final submittal.

c. Submittals marked "return for correction" require the Contractor to make the necessary corrections and revisions and to re-submit them for approval in the same routine as before, prior to proceeding with any of the work depicted by the submittal.

d. Submittals marked "not approved" or "disapproved" indicate noncompliance with the contract requirements and shall be re-submitted with appropriate changes. No item requiring a submittal shall be accomplished until the submittals are approved or approved as noted.

e. Contractor shall make corrections required by the Contracting Officer. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the contract drawings or specifications; notice as required under the clause entitled, "Changes" shall be given to the Contracting Officer.

## 1.6 APPROVED SUBMITTALS

The approval of submittals by the Contracting Officer shall not be construed as a complete check, but will indicate only that the general method of work is satisfactory. Approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor is responsible for the satisfactory performance of the work in accordance with the contract documents, including all applicable regulations.

### 1.6.1 Changes To Approved Submittals

If changes are necessary to approved submittals, the Contractor shall make such revisions and submission of the submittals in accordance with the procedures above. No item of work requiring a submittal change shall be accomplished until the changed submittals are approved. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting alternate methods or work procedures will be given consideration unless accompanied by an explanation as to why a substitution is necessary.

## 1.7 DISAPPROVED SUBMITTALS

The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies required for Government approval. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, notice as required under the Contract Clause entitled "Changes" shall be given promptly to the Contracting Officer.

## 1.8 SCHEDULING

Adequate time shall be allowed for Government review and approval. Items requiring Government approval shall allow for a minimum 14 calendar day period for Government review and approval of the initial submittal and a 7 calendar day period for Government review and approval for subsequent submittals, if required. Review periods are exclusive of mailing time.

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Sonic Drilling for Soil Borings and Monitoring Well Installation,  
Fort Lewis, Washington

#### 1.9 WITHHOLDING OF PAYMENT

Payment for materials and equipment incorporated or installed in the facility and not in compliance with the contract documents or if required approvals have not been obtained will not be made.

#### 1.10 PAYMENT

Separate payment, except as identified in the BID SCHEDULE, will not be made for submittals of contract data, and all costs associated therein shall be included in the applicable unit prices or lump sum prices contained in the schedule.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION



## SECTION 01410

### ENVIRONMENTAL PROTECTION

#### PART 1 GENERAL

##### 1.1 GENERAL REQUIREMENTS

The Contractor shall perform the work minimizing environmental pollution and damage as the result of exploration activities and monitoring well installation under this contract. For the purpose of this specification, environmental pollution and damage is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the utility of the environment for aesthetic, cultural, and/or historical purposes. The control of environmental pollution and damage requires consideration of air, water, and land, and includes management of visual esthetics, noise, solid waste, and erosion from storm water, as well as pollutants.

##### 1.2 LAWS AND REGULATIONS

The Contractor shall comply with all applicable Federal, state, and local environmental, natural and cultural resources, and historic preservation laws and regulations. Specific attention is directed to Fort Lewis Regulation No. 200-1 "Environmental Protection and Enhancement."

##### 1.3 ENVIRONMENTAL PROTECTION

The Contractor shall take all precautions as may be required to prevent contaminated water or water having undesirable physical or chemical characteristics from entering Murray Creek and the water supply stratum through the boring. Care shall be taken to preserve the natural barriers to ground-water movement between aquifers and to seal aquifers or strata penetrated during drilling operations which might impair water quality or result in cascading water. Refer to Section 02211, Paragraph: Sonic Core Drilling. A plastic sheeting pad with berm shall be placed under and around the drill rig and under all supporting equipment to prevent spilled or leaking fuel and lubricants from entering the soil cover or surface waters. The Contractor shall cover the boring at all times when not at the work site. The cover shall be secured in place or weighted down so that it cannot be removed except with the aid of the drilling equipment or through the use of drill tools. Should hazardous waste enter Murray Creek or other surface water bodies during the performance of this contract the Contractor shall immediately notify the Fort Lewis Fire Department (dial 911). Secondary notification shall be made to the Hazardous Waste Management Section, telephone (253) 967-4786 or 3268.

##### 1.3.1 Protection Of Land Resources

Prior to the beginning of any work, the Contractor shall identify the land resources to be preserved within the work area. The Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without special permission from the Contracting

Officer's Representative. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized.

### 1.3.2 Disposal Of Solid Waste

The Contractor will be responsible for the disposal off site of all refuse generated (i.e. ground protection materials, tyvek, gloves, etc) in the course of performance of this contract, to include, transport, handling, and dumping fees. The Contractor will not be permitted to deposit refuse in existing garbage cans or refuse dumpsters. No burning of refuse is allowed.

### 1.3.3 Protection Of Air Resources

Dust particles, aerosols, and gaseous byproducts from investigation activities shall be controlled at all times, including weekends, holidays, and hours when work is not in progress. The Contractor shall not conceal or mask the emission of an air pollutant which violates air pollution regulations or causes a detriment to the health, safety, or welfare of any person. Fugitive dust created as a result of drilling activities shall be controlled such as spraying with potable water. Contractor vehicles shall not enter public roadways with deposits of mud, dirt, or other debris or unsecured loads.

## PART 2 PRODUCTS

Not Applicable.

## PART 3 EXECUTION

### 3.1 DRILL RETURN WASTE AND DRUM MANAGEMENT

The Contractor shall accumulate drill return wastes, drill core, and decontamination fluids in Government furnished drums and containers. See SECTION 02211, paragraph: Containerization of Investigation Derived Waste (IDW) and Soil Cores. The Contractor shall contact the Hazardous Waste Management Section, telephone (253) 967-4786 for drums and containers. Each hazardous waste container shall be clearly labeled with the words hazardous waste, a description of the waste, and the hazard associated description or label. Any container issued by the Hazardous Waste Management Section at Fort Lewis shall have a bar-coded label that contains all necessary labeling information. This label can be obtained by contacting the Hazardous Waste Management Section. Contractor shall transport Government furnished containers to a Government approved central location. The Contractor's on site IDW staging area shall have a containment system capable of collecting and holding spills and leaks. Contractor will not be responsible for the transportation and disposal off Fort Lewis of any hazardous waste generated from the execution of this contract.

END OF SECTION

## SECTION 02211

### SONIC CORE DRILLING AND MONITORING WELL INSTALLATION

#### PART 1 GENERAL

##### 1.1 APPLICABLE PUBLICATIONS

The publications listed below form a part of this specification to the extent referenced and are referred to by basic designation only. Standards shall conform to latest edition at time of bidding.

##### AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z 535.1	Safety Color Code
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##### AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 387	(Rev-95) Packaged, Dry, Combined Materials for Mortar and Concrete
ASTM C 150	Portland Cement
ASTM D 1784	Rigid Poly (Vinyl Chloride) (PVC) compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
ASTM D 1785	Poly(Vinyl Chloride)(PVC) Plastic Pipe, Schedules 40, 80, and 120
ASTM D 2467	Socket Type Poly (Vinyl Chloride) PVC Plastic Pipe Fittings, Schedule 80
ASTM D 5088	Decontamination of Field Equipment Used at Non-Radioactive Waste Sites
ASTM D 1889	Turbidity of Water
ASTM D 5092	Design and Installation of Ground Water Monitoring Wells in Aquifers
ASTM F 480	Thermoplastic Well Casing Pipe and Couplings Made in Standard Dimension ratios (SDR), Sch 40 and Sch 80

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1910.120	Hazardous Waste Operations and Emergency Response
40 CFR 262	Standards Applicable to Generators of Hazardous Waste
40 CFR 302	Designation, Reportable Quantities, and Notification
49 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials, Communications, Emergency Response Information, and Training Requirements

NSF INTERNATIONAL (NSF)

NSF ANSI/NSF 14	Plastics Piping Components and Related Materials
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U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	U.S. Army Corps of Engineers Safety and Health Requirements Manual
EM 1110-1-4000	Monitoring Well Design, Installation, and Documentation at HTW Sites

These documents may be accessed on the internet at the following address:  
<http://www.usace.army.mil/inet/usace-docs/eng-manuals/em.htm>

ER 385-1-92	Safety and Occupational Health Document Requirements for Hazardous, Toxic, and Radioactive Waste (HTRW) Activities.
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STATE OF WASHINGTON, WASHINGTON ADMINISTRATIVE CODE (WAC)

WAC 173-160	(Rev 23 April 1998) Minimum Standards for Construction and Maintenance of Wells
WAC 173-162	Regulation and Licensing of Well Contractors and Operators

ENVIRONMENTAL PROTECTION AGENCY (EPA)

625/R-93/003a	Subsurface Characterization and Monitoring Techniques – a Desk Reference Guide – Volume I: Solids and Ground Water Appendices A and B
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## 1.2 SCOPE

### 1.2.1 General

It is the intent and purpose of the work specified herein to determine the character, condition, and thickness of the subsurface materials and the location and character of non-aqueous phase liquids (NAPL) as they exist using sonic core drilling methods. Contractor shall obtain continuous sediment cores of the overburden for on site geotechnical logging and site characterization. Maximum boring depth is 120 feet below ground surface (approximately the top of the Kitsap aquitard) for all borings not designated as Lower Aquifer borings or wells. Maximum Lower Aquifer boring depth is 300 feet below ground surface (approximately the top of the Salmon Springs Advance Outwash). The work consists of furnishing all plant, labor, materials, transportation, supplies, and accessories required to accomplish the investigations, monitoring well completions, and all other operations incidental to the work in strict accordance with these specifications and applicable schedule. The Government will furnish borehole and core logging services through it's contracted Architect-Engineer (AE) firm, URS Corporation.

### 1.2.2 Sonic Core Drilling

Sonic core drilling shall be by methods selected by the Contractor. Other names used to describe sonic drill method are vibratory drilling and roto-sonic drilling in EPA 625/R-93/003a. Each monitoring well shall be constructed to yield representative ground water samples of the screened interval for chemical analysis and to allow for the accurate measurement of ground water depths relative to the top of the well riser.

### 1.2.3 Personnel

The Contractor shall provide personnel consisting of at least one experienced operator and two helpers.

### 1.2.4 Drilling Permits and Performance Requirements

The Contractor shall be responsible for obtaining permits, licenses, filing monitoring well reports, paying fees and other requirements necessary for prosecution of the work and paying all costs thereof. All work and materials for the installation of the monitoring wells shall conform to the requirements of WAC Chapter 173-160. Access to and preparation of each monitoring well site for drilling is the responsibility of the Contractor. Contractor shall obtain underground utility clearances (digging permits) through the office of Public Works on Fort Lewis (See Section 01145 SITE SPECIFIC REQUIREMENTS, Paragraph, 1.4 "Digging Permit."

### 1.2.5 Soil Boring/Monitoring Well Locations And Anticipated Subsurface Materials

All borings are located either on the Fort Lewis military installation or Camp Murray. Fort Lewis, and adjacent Camp Murray, lie just south of Tacoma, Washington, see Figure 1 (under Attachment J3). Soil boring/monitoring well locations and their respective anticipated subsurface materials are broken into two groups: Upper Aquifer and Lower Aquifer.

### 1.2.5.1 Upper Aquifer

Upper Aquifer borings and wells will be installed in two areas; the East Gate Disposal Yard (EGDY) and Landfill 4. At EGDY, work consists of drilling vertical soil core borings in silty sandy gravel overburden up to 120 feet depth and in groundwater contaminated with primarily trichloroethylene (TCE). TCE concentrations will range from non-detect to less than 10 mg/l at EGDY. Borings drilled in the EGDY shall be telescoped by casing off the upper, highly contaminated portion of the Upper Aquifer (seated into intermediate aquitard) and sealed prior to continuance of drilling with a smaller diameter casing. At Landfill 4, groundwater contaminated primarily with TCE between non-detect levels and 200 ug/l will likely be encountered in the Upper Aquifer. Upper Aquifer subsurface materials range from silty sandy gravels to glacial till to a glaciolacustrine clay/fine sand unit. The glacial till and lacustrine units are suspected to act together as an intermediate aquitard in the EGDY at depths 35 to 40 feet below ground surface. It is possible that the TCE contaminant may have penetrated below the intermediate aquitard. Summary logs of nearby representative exploratory borings are included under Attachment J4. Variations from the conditions shown in these logs are to be expected. Depth to groundwater is anticipated to vary between 10 and 30 feet below ground surface. Monitoring wells will be installed in selected borings. The Contracting Officer's Representative will determine the depths at which monitoring wells will be installed. General boring locations are shown on the enclosed drawings (see Figures 2 and 3 under Attachment J3).

### 1.2.5.2 Lower Aquifer

Work consists of drilling vertical soil core borings in silty sandy gravel overburden up to 300 feet depth. Lower Aquifer groundwater encountered should be free of contamination; however, if TCE-contaminated groundwater is encountered, it is not likely to be above 10 ug/l. Lower Aquifer subsurface materials range from silty sandy gravels to glacial tills to fine-grained lacustrine deposits. The fine grained, non-glacial deposits are generally present below the area of interest and form an aquitard between Upper and Lower Aquifer units. Summary logs of nearby representative exploratory borings are included under Attachment J4. Variations from the conditions shown in these logs are to be expected. Depth to groundwater is anticipated to vary between 90 and 150 feet below ground surface. Monitoring wells will be installed in borings into the Lower Aquifer. Because no Upper Aquifer contamination exists in areas to be drilled for Lower Aquifer wells, no casing reduction will be required. The Contracting Officer's Representative will determine the depths at which monitoring wells will be installed. The general area in which Lower Aquifer borings are to be installed is shown on the enclosed drawing (see Figure 3 under Attachment J3).

## 1.3 DEFINITIONS

### 1.3.1 Standby Time

Standby time is time during which the Contractor is temporarily unable to work due to delays in the drilling operation required by the Contracting Officer. Standby time includes special down hole testing to be conducted by the Contracting Officer's Representative and operations that impact normal work day performance, and unforeseen, temporary conditions which result in a lack of access to the drilling site. Standby time will not be used to conduct daily and/or weekly safety meetings.

### 1.3.2 Down Time

Down time is defined as time during which the drilling equipment is broken down, or when work is otherwise delayed by climatic conditions or the Contractor is not providing the necessary coordination or support for a continuous drilling operation. The Contractor will not be compensated for down time.

## 1.4 SUBMITTALS

Submittals required by this section shall be for Government approval (GA) or for information only (FIO), and shall be submitted as stated below in accordance with Section 01330, SUBMITTAL OF CONTRACT DATA.

### 1.4.1 State of Washington Driller License (FIO).

Submit copies of the Contractor's and well driller's State of Washington Licenses.

### 1.4.2 Health and Safety Training and Respirator Fit Program (FIO).

The Contractor shall submit evidence that his on site employees and his subcontractor's on site employees have attended a 40-hour personal protection and safety class and yearly refresher courses under 29 CFR 1910.120. Any Contractor personnel supervising on site shall have an additional 8 hours of supervisory training per 29 CFR 1910.120. Included, but not restricted to in this requirement, is a yearly medical monitoring program and a respirator fit and maintenance program for hazardous waste worker personnel. All personnel required to use personal protective equipment (PPE) shall meet the training and medical monitoring requirements of 29 CFR 1910.120. It shall be the responsibility of the Contractor to ensure that all work carried out is performed in a manner that is safe and protective of human health and the environment in accordance with these specifications, 29 CFR 1910, and the U.S. Army Corps of Engineers Safety and Health Requirements Manual (EM 385-1-1). Work at the EGDY will be initiated in personal protection level D. The Contractor shall provide and require the use of PPE including tyvek suit, gloves, and respirator when the results of air monitoring require it. The Contractor will be held responsible for ensuring that operations under its control do not jeopardize the health and safety of public or private sector workers, or the environment.

### 1.4.3 Accident Prevention Plan and Activity Hazard Analysis (GA).

URS Corporation will be responsible for preparation of the project Site Health and Safety Plan (SHSP). Contractor shall work with the URS Corporation field representative to develop both the Accident Prevention Plan (APP) and Activity Hazard Analysis (AHA). Both are supplemental plans to be prepared by the Drilling Contractor. The APP and AHA shall be submitted for approval to the Contracting Officer's Representative a minimum of 14 calendar days prior to the start of the field work. See Paragraph 1.5 below for guidance on preparation of the APP and AHA. In addition, the Contractor shall submit a copy of their company's standard operating procedures for safe drilling. Mobilization activities may start prior to submittal of the required data. Failure to provide the required information will result in delayed project startup at the Contractor's expense.

#### 1.4.4 Spill and Discharge Control Plan, (GA).

A spill and discharge control plan shall be submitted to the Contracting Officer's Representative a minimum of 14 calendar days prior to the start of the field work

#### 1.4.5 Drilling Start Cards, (FIO).

Copies of such documents shall be submitted to the Contracting Officer's Representative at the beginning of the work.

#### 1.4.6 Borehole Decommissioning Records, (FIO).

The Contractor shall submit decommissioning records to the Contracting Officer's Representative and to Washington State Department of Ecology in accordance with WAC 173-160.

#### 1.4.7 Driller's Log (FIO).

Daily record of drilling operations for each boring drilled and for each monitoring well installed shall be submitted to the Contracting Officer's Representative at the conclusion of each soil boring and monitoring well, or as otherwise directed.

#### 1.4.8 Tool Lubricant (GA).

Chemical analyses of lubricants used in making up tool joints shall be submitted to Contracting Officer's Representative for approval prior to commencement of drilling.

### 1.5 ACTIVITY HAZARD ANALYSIS (AHA) AND ACCIDENT PREVENTION PLAN (APP).

The AHA shall specifically list, in chronological order, the specific steps of each task, the specific hazard(s) associated with the task, the specific engineering control technique(s)/method(s), administrative controls (including work practices), and specific personal protective equipment (PPE) which will be used to mitigate said hazards. The AHA shall be presented in the table format depicted in Figure 1-1 of Section 1 of EM 385-1-1. The AHA shall include all work that is to be performed by subcontractors. The APP shall meet all of the basic requirements as delineated in Section 1 (01.a.07) and Appendix A, of EM 385-1-1, as well as 29 CFR 1910.120. The Contractor shall not commence on site work activities, with the exception of mobilization to the work site, until the APP has been approved by the Contracting Officer's Representative. The APP shall be made available to all persons entering onto the work site(s) in accordance with EM 385-1-1. A copy of the written APP shall be maintained on site. All site workers shall be current in the training requirements specified in 29 CFR 1910.120 and proof of said training, for both supervisory personnel as well as non-supervisory personnel, shall be included in the APP. The Contractor's Accident Prevention Plan shall clearly state, in enforceable language, the corrective measures that will be taken to preclude workers and equipment from being damaged or imperiled by the work activities required to perform the work. The Accident Prevention Plan shall include all of the activities of any subcontractors and shall demonstrate and ensure the safety and health of subcontractor personnel.



## 1.6 SPILL AND DISCHARGE CONTROL PLAN

The Contractor shall develop, implement, maintain, supervise, and be responsible for a comprehensive spill and discharge control plan. This plan shall provide contingency measures and reporting responsibilities for potential uncontrolled spills and discharges of contaminated and/or hazardous materials, including, but not limited to, leachate, decontamination water, and containerized liquids and material. The plan shall contain:

- a) procedures for containing soil and liquid spills;
- b) absorbent material available on site;
- c) storage of spilled materials; and
- d) reporting procedures.

## 1.7 PERSONAL PROTECTIVE LEVEL C.

When the results of air monitoring require Level C protection the Contractor shall furnish all labor, equipment, materials, and capabilities for the exploration program to continue in a Level C environment. The equipment needed will include, but not be restricted to supplying appropriate respirators, protective suits, ventilation fans approved as intrinsically safe, and chemical-resistant gloves for the drill crew. The Contractor shall provide a decontamination station, complete with equipment and materials, in accordance with the Accident Prevention Plan. If air monitoring equipment or analytical tests indicate the need for PPE at levels B or A, the Contractor shall temporarily cease all work at the boring site and mobilize onto the next boring site. The Contracting Officer's Representative will determine disposition of the problem boring site.

## PART 2 PRODUCTS

### 2.1 MONITORING WELL MATERIALS

#### 2.1.1 PVC Well Casing - Riser Pipe

PVC well casing (riser pipe) shall be new, 2-inch nominal diameter, schedule 80, white PVC, Type 1, Grade 1 material as described in ASTM F 480 and ASTM D 1784, Class 12454b. Pipe shall also meet the requirements of NSF 14. Required fittings shall be ASTM F 480 flush thread male by female fittings and including O-ring. PVC end caps designed to fit snugly on the top of the riser shall be provided. Riser pipe shall be free of foreign matter (adhesive tape, labels, soil, grease, etc.) and cleaned by a hot water pressure washer. Washing may be omitted if riser pipes have been pre-washed and packaged by the manufacturer and have the packaging intact up to the time of installation. Washed risers shall be stored in plastic sheeting or kept on isolated clean racks prior to their placement in the well. When requested by the Contracting Officer's Representative, PVC pipe slips shall be used to lower the PVC pipe column into the boring. Riser pipe shall be handled using clean gloves while installing into the well bore. PVC centralizers shall be placed at the top of the screen and at 40-foot intervals to the surface.

#### 2.1.2 Poly (vinyl chloride) (PVC) Well Screen

Channel-pack PVC well screen consists of an inner screen and an outer screen with filter sand packed into the annulus. The 2-inch nominal inside diameter channel-pack screens shall be continuous triangular wire wrapped screen. The screen slot size shall be 0.020-inch. Screens shall be furnished in 5-foot-lengths. Ten feet of screen shall be furnished for each well. End fittings shall be compatible with ASTM F-480 and include an O-ring. The bottom screen section of each monitoring well screen shall be sealed

watertight by means of a flush threaded end cap of the same material as the well screen. The filter pack shall be clean, washed uniformly graded number 10-20 silica sand. Channel-pack screen shall be individually wrapped in protective covering prior to shipment. Screen shall be handled using clean gloves while installing into the boring.

### 2.1.3 Multi-port Monitoring Well

The multi-port monitoring well system is built completely above ground at the project site and inserted into the boring prior to withdrawing the temporary casing. Screened intervals will be selected by a Government representative based on the boring logs. Filter sand will be placed in zones containing sample ports as described in Paragraphs 2.1.4 and 3.3.3: "Filter Pack," and bentonite will be emplaced between the sampled zones as described in Paragraphs 2.1.5 and 3.3.4: "Bentonite Well Seal." Multi-port system design and well component materials will be dependent upon the aquifer characteristics in which the well is installed.

#### 2.1.3.1 Upper Aquifer Multi-port Monitoring Well

Each Upper Aquifer multi-port well shall consist of continuous, extruded polyethylene tubing and be constructed such that at least four sampling ports can each be accessed for groundwater sample collection and water level measurements. The ports shall be hydraulically separate from each other and accessible to groundwater by screens installed on site. The screen size shall be designed to prevent sand and silt from entering the well ports. Each multi-port well shall be self-contained, that is, the sampling ports shall all be contained within one well stem. No "nested" wells of multiple well stems in the same borehole will be allowed. Centralizers shall be secured to the outside of the well stem every 40 feet. Static depth to groundwater in Upper Aquifer well locations varies from approximately 10 to 30 feet below ground surface.

#### 2.1.3.2 Lower Aquifer Multi-port Monitoring Well

Each Lower Aquifer multi-port well shall be constructed such that up to four sampling ports can each be accessed for groundwater sample collection and water level measurements. The ports shall be hydraulically separate from each other and accessible to groundwater by screens installed on site. The screen size shall be designed to prevent sand and silt from entering the well ports. Each multi-port well shall be self-contained, that is, the sampling ports shall all be contained within one well stem. No "nested" wells of multiple well stems in the same borehole will be allowed. Centralizers shall be secured to the outside of the well stem every 40 feet. Since static water levels in screened Lower Aquifer zones may be as deep as 150 feet below ground surface, the method chosen to deliver groundwater to the surface will require up to 150 feet of lift from the deepest port. If dedicated, down hole pumps are used in the Lower Aquifer multi-port well design, the pump selected shall minimize gas-water or air-water contact and shall be suitable for collection of volatile organics samples.

#### 2.1.4 Filter Pack

Filter pack shall consist of clean, washed, rounded to sub-rounded siliceous material free from calcareous grains or material. Organic matter, soft, friable, thin, or elongated particles are not permissible. Contractor shall furnish to the job site two gradations of filter pack material: nos. 10-20 and 20-40, in sufficient quantities to complete monitoring well installations as specified.

#### 2.1.5 Bentonite Well Seal

The bentonite seal for conventional type wells (non-multi-port), intended to keep grout from entering the filter pack, shall consist of hydrated, sodium montmorillonite in pellet form furnished in plastic-lined sacks or buckets from a commercial source and free of impurities that adversely impact the water quality. Bentonite pellets shall be commercially formed into approximately 3/8-inch- to 1/2-inch-diameter spherical or cylindrical shapes. Bentonite pellets shall contain no additives such as synthetic or organic polymers. Either pumpable, high-solids bentonite grout slurry or dry, granular bentonite made for the environmental drilling industry shall be used for bentonite seals in multi-port wells. Injection of dry, granular bentonite seals will be allowed for multi-port well construction when conditions allow.

#### 2.1.6 Grout

Two types of grout shall be used, depending on location. For source area (EGDY) borings and wells, cement-silica grout shall be used. For all other locations, regular, cement-bentonite grout shall be used.

##### 2.1.6.1 Cement-Silica Grout

For borings and wells located in the source area at EGDY, the grout used to decommission soil borings and to construct the monitoring well annular seals shall consist of cement-silica grout, which includes Portland cement conforming to ASTM C 150, Type I or II, silica flour, and water. Cement-silica grout shall be proportioned not to exceed 7 gallons of water per cubic foot of cement. Forty percent dry weight of silica powder (e.g. IMSIL 1240) shall be added to provide a thermal grout seal.

##### 2.1.6.2 Cement-Bentonite Grout

For all other borings and wells located outside the EGDY, regular cement-bentonite grout shall be used and shall consist of Portland cement conforming to ASTM C 150, Type I or II, granular bentonite, and water. Cement-bentonite grout shall be proportioned not to exceed 7 gallons of water and no more than 4 pounds of bentonite per cubic foot of cement.

#### 2.1.7 Protective Metal Casing

Steel casing wall thickness shall be minimum of 0.250-inch and shall meet the requirements of ASTM A-53. Only casing of standard manufacture will be accepted for use in borings. Mill reject pipe will not be allowed. The protective metal casing inside diameter shall be at least 4 inches greater than the nominal diameter of the well riser. The protective metal casing shall be

fitted with a locking cap and installed so that there is a maximum 0.2 foot clearance between the top of the in-place inner well riser cap and the bottom of the protective metal casing locking cap when in the locked position. The protective metal casing shall be primed and painted yellow before positioning. The yellow color for finish coats shall be as defined in ANSI Z53.1.

#### 2.1.8 Concrete Pad

Concrete for the well pads may either be pre-packaged or poured concrete. Pre-packaged materials for concrete shall conform to ASTM C 387 normal weight, normal strength concrete. The dry materials shall be combined with potable water and mixed in an approved mixer or container until uniform in consistency and color. Water shall be limited to the minimum amount possible. Poured concrete shall consist of clean, hard and durable aggregate with not less than 5 sacks of Portland cement per cubic yard of concrete. The maximum aggregate size shall not exceed 1 inch. The ratio of coarse aggregate to fine aggregate (passing No. 4 U.S. Standard Sieve) shall be approximately 1.5 to 1 by volume.

#### 2.1.9 Protective Posts.

Protective steel posts shall be 3-inch diameter, schedule 40, carbon steel and a minimum of 6 feet long. The yellow color for finish coats shall be as defined in ANSI Z53.1.

### PART 3 EXECUTION

#### 3.1 SANITATION OF EQUIPMENT

After arrival at the EGDY site and prior to commencement of drilling, all drilling equipment to include rigs, support vehicles, water tanks, drill casings, rods, core barrels, tools, circulation tanks, and tremie pipes, shall be cleaned with steam or pressurized hot water using water from a Government approved source. Core barrels shall also receive a final rinse with approved water. All the equipment listed above shall be devoid both inside and outside of any asphalt, bituminous or other encrusting or coating materials such as grease, grout, and soil. When the equipment is cleaned, the cleaning shall be carried out in such a location that the operation will not adversely impact the ongoing work. All wash water shall be allowed to infiltrate the ground surface at a predesignated area determined by a Government representative. Cleaning shall also occur between each boring/well site. After the onsite cleaning, only the equipment used or soiled at a particular boring or well requires cleaning between boring sites. Unless circumstances are specified otherwise, water tank interiors will not require cleaning between each boring/well at a given project. Where drilling requires telescoping casing because of differing levels of contamination in subsurface strata, then decontamination shall be necessary before setting each string of smaller casing and before drilling beyond any casing. All equipment shall be decontaminated before it is removed from the project site.

#### 3.2 SONIC CORE DRILLING

Purpose of the sonic core drilling is to determine composition, thickness, and sequence of materials composing overburden to establish position of the water bearing zones and, at the EGDY, to identify the nature and extent of NAPL. The Contractor shall furnish one water truck with a minimum 2,000-gallon tank capacity to supply water for drilling, equipment decontamination, and dust control. Several sonic

borings will be drilled through the intermediate aquitard to the top of the Kitsap aquitard in the Upper Aquifer at EGDY. These may be completed as monitoring wells. Some sonic soil borings will be drilled into the intermediate aquitard to varying depths. For each soil boring a temporary casing reduction and sealing of the intermediate aquitard formation shall be accomplished at the top of the intermediate aquitard to prevent downward migration of NAPL during coring activities at EGDY. Four monitoring well borings, each approximately 40 feet depth, will be drilled by sonic method down to the top of the aquitard for DNAPL collection and four shallow monitoring wells will be drilled by sonic method and screened across the water table for LNAPL collection. Several sonic borings will be drilled within the Upper Aquifer at the Landfill 4 area, and may be completed as multi-port wells. Since shallow contamination is anticipated at Landfill 4, casing reduction shall be assumed. No NAPL is anticipated at the Landfill 4 area. Several sonic borings will be drilled into the Lower Aquifer. Since the Upper Aquifer is uncontaminated in these areas, casing reduction will not be required. Geologic contacts will be identified by the URS Corporation site geologist. A core barrel shall be advanced in front of the casing to collect continuous core sample. The outer diameter of the core barrel will be such that little or no soil cuttings will remain within the walls of the six-inch nominal diameter sonic-driven casing, which will be required for installation of the 2-inch diameter wells. When casing reduction is required for contaminated zones, the Contractor shall begin drilling using 10-inch diameter sonic-driven casing and telescope to 6-inch below the contaminated zone. The core barrel shall be advanced in either 5-foot runs or 10-foot runs depending on subsurface conditions. Core shall be vibrated out of the core barrel and into a plastic sleeve, knotted at both ends. The Contractor shall provide a means to measure the temperature of each core upon retrieval, and shall take necessary steps to prevent extreme heating of the core. Also, Contractor shall provide two each five-foot-long split barrels that can be combined for a 10-foot sample run. Decision as to when to use the split barrels will be made by the site geologist.

### 3.2.1 Drill Cuttings and Return Water

Drill cuttings brought to the surface during drilling shall be contained in a Contractor provided dump truck or other vehicle capable of hauling cuttings from each drill site to the EGDY. Water brought to the surface during drilling shall be contained in Government furnished drums and containers and transferred to the Baker Tank stationed at the EGDY. The Contractor shall furnish all labor, materials and equipment, and perform all work to satisfactorily install, maintain and operate a plastic lined drum/container containment, area with berm, and all temporary drainage, piping, and other equipment needed to prevent the job site from being inundated. Refer to paragraph 3.6: "Containerization of Investigation Derived Waste (IDW) and Soil Cores." The Contractor shall provide spill response materials including, but not limited to the following: containers, adsorbents, shovels, and personal protective equipment. Spill response materials shall be available at all times in which hazardous materials/wastes are being handled or transported. Spill response materials shall be compatible with the type of materials and contaminants being handled.

### 3.2.2 Tool Lubricants

The Contractor shall use only hydrocarbon free tool joint lubrication in making up drill strings. Chemical analytical data on lubricant constituent compounds shall be submitted to the Contracting Officer's Representative for approval prior to commencement of drilling. Lubrication of tool joints shall be conducted in such a manner as to avoid excessive application and subsequent contamination of any

monitoring well. The brand name and manufacturer of the lubricant shall be noted on the daily log and provided as a submittal in accordance with Paragraph 1.4.8: "Tool Lubricant."

### 3.3 MONITORING WELLS

#### 3.3.1 Installation-General

The well installation method shall prevent the collapse of formation material against the well screen and riser casing. The inside diameter of any temporary steel casing used shall be sufficient to allow accurate placement of the well screen, riser pipe, centralizers, supplementary filter pack, bentonite pellet seal and annular grout seal. Direction for completing each monitoring well will be made by the designated Government Representative. The difference between the final depth of the soil boring and the bottom of the well screen may be significant and may require the placement of grout (cement-silica grout for EGDY and cement-bentonite grout for other areas) below the well screen using a tremie pipe. A minimum of 24 hours will be required to allow the grout to set before completing the well.

#### 3.3.2 Multi-port Monitoring Well

Any tubing used in the multi-port well design shall be furnished at the work site in continuous lengths to reach the required depths for sampling. Tubing lengths shall not be joined together, but instead shall be continuous lengths between the ground surface and sampling ports. All multi-port well components, including but not limited to sampling ports, wire mesh screen, double valve pumps, sample tubing, PVC casing or extruded polyethylene well tubing shall be assembled in the field into a multi-port well system beside the temporarily cased bore hole. The multi-port monitoring well shall be installed with sand filter pack and bentonite seals between discrete sampling ports. If the Contractor does not have practical field experience installing multi-port wells under similar geologic and hydrogeologic conditions prior to mobilization, the Contractor shall retain the services of the well system manufacturer for on-site consultation on installation of the first installed well of each well type.

#### 3.3.3 Filter Pack

The artificial filter pack shall be installed around the well screen from the bottom of the screen to approximately 3 feet above the top of the well screen. A secondary filter pack consisting of a one to two-foot thick layer of washed no. 20-40 silica sand shall be placed on top of the screen filter pack material in conventional wells to prevent grout sealing materials from migrating down the well bore into the filter. The finer grained, secondary filter pack will not be required for multi-port well installations. All filter pack material shall be protected from contamination prior to placement by either storing in plastic-lined bags or in a location protected from the weather and contamination. All filter pack materials shall be transported to the work site in a manner that prevents contamination by other soils, oils, and grease, and other chemicals. Filter pack materials shall be placed through a tremie pipe as the drill casing is retracted. Additions of filter pack material shall be coordinated with casing retraction so that the filter materials extend a minimum of 0.5-foot above the bottom of the drill casing. The temporary drill casing shall never be pulled above the level of the filter pack. Frequent measurements shall be made in the boring as the casing is pulled back. Measurements shall be performed by lowering a weighted sounding device into the annulus between the drill casing and well riser.

### 3.3.4 Bentonite Well Seal

A 3- to 5-foot-thick bentonite plug shall be placed on top of the filter pack for conventional type (non-multi-port) monitoring wells. Bentonite pellets shall be slowly poured into the annular space between the drill casing and the well riser. The drill casing shall be pulled as the bentonite is added to prevent creation of a bridge between the drive casing and the riser. Bentonite shall be added until the plug is at least 3 feet thick, as verified by repeated measurements with a sounding line. Annular grout sealant shall not be added until the bentonite plug has been allowed to hydrate at least one hour. For well seals placed above the water table the Contractor shall use potable water to hydrate the pellets. For multi-port wells, injection of either pumpable, high-solids bentonite grout slurry or dry, granular bentonite shall be used for bentonite seals. The bentonite seals will be injected through a grouting tube with its discharge at the point of placement while casing is being pulled. Seals shall be placed in a method that insures minimal disturbance of the filter packed zone. Seals shall be placed between pre-determined, sand-packed sampling zones. Thus, multi-port well bentonite seals will vary in thickness depending on the length of annulus between sampling zones. For multi-port well bentonite seals, sufficient time shall elapse to allow for either in-situ slurry or dry bentonite swelling prior to the construction of the next filter packed zone. The top of each bentonite seal must be sounded for depth to insure proper bentonite emplacement.

### 3.3.5 Grout

The grout shall be mixed using a mechanical grout mixer and stirred in a mechanically agitated sump. Contractor shall supply a pump capable of handling the specified sealant mixture. A progressing cavity pump similar to those manufactured by the Moyno Pump Division is recommended for this work. The grout shall be tremied into the monitoring wells from above the bentonite plug to within 1 foot of the ground surface. Sealant shall be installed using a side-discharge tremie pipe. After 24 hours the Contractor shall check for grout settlement and that day add more grout to fill any depression.

### 3.3.6 Protective Metal Casing

A protective metal casing shall be installed around the well riser by placing the protective metal casing into the annular seal. Protective casing shall be maintained in a plumb position. The bottom of the protective metal casing shall extend a minimum of 2.5 feet below the maximum frost penetration (frost line) and shall extend at least 2.5 feet above the surface of the ground. The protective metal casing shall be sealed and immobilized in concrete placed around the outside of the protective metal casing. Dry bentonite pellets, granules, or chips shall then be placed in the annular space below ground level within the protective metal casing. An internal mortar collar shall be placed within the protective casing annulus from the ground surface to 6 inches above the ground surface. The mortar mix shall be (by weight) 1 part cement to 2 parts sand (the granular filter used around the well screen), with minimal water for placement. The protective casing shall have a 1/4-inch-diameter drain hole installed just above the top of the mortar collar. Coarse sand or pea gravel shall be placed in the annular space between the protective casing and the riser pipe, above the drain hole, to within 3 inches from the top of the riser pipe. The metal protective casing shall be provided with a heavy duty, "tamper resistant" locking mechanism. A corrosion resistant metal tag shall be affixed to the exterior and interior of the protective cover. The metal tag shall be stamped with well identification number and date of well installation.

### 3.3.7 Concrete Pad

Provide an appropriate base course for frost heave beneath the concrete pad. A minimum 4-foot-square, 6-inch thick concrete pad sloped away from the well shall be constructed around the protective metal casing. The pad shall extend 4 inches below grade and 2-inches above grade. The ground immediately surrounding the top of the well shall be sloped away from each well.

### 3.3.8 Protective Posts

Four protective steel posts shall be installed equally spaced around the concrete pad. Each post shall be filled with cement. The posts shall not be installed in the concrete pad, but rather from 0.5-1.0 foot distance from the edge of the concrete pad. Posts shall be embedded in concrete 3.5 feet below ground surface. The protective metal casing and guard posts shall be primed and painted yellow.

## 3.4 MONITORING WELL DEVELOPMENT

The Contractor shall allow the annular grout seal to stabilize for a minimum of 72 hours before commencing monitoring well development operations. Equipment used in the development shall be cleaned as specified in Paragraph 3.1, "Sanitation of Equipment," prior to use in each monitoring well. Development shall be performed using mechanical surging and pumping for the standard type monitoring well installations as defined in WAC 173-160. At no time shall air be introduced into the formation during the development procedure. Multi-port wells with dedicated pneumatic drive pumps shall be developed using the down hole pumps; multi-port wells without pneumatic drive pumps shall be developed using an inertial-type tube pump, or other methods as approved by the Government. Well development for all monitoring wells, including standard type wells and multi-port wells, shall continue until the discharge water is sufficiently clear in the opinion of the site-geologist who will be measuring several groundwater parameters including pH, temperature, turbidity, and conductivity before and during the development process. Development water shall be contained. Any well where NAPL is determined to be present shall not be developed.

### 3.4.1 Surge Block

The surge block used in the standard type monitoring well shall have a diameter slightly less, approximately 1/8-inch than the inside diameter of the PVC well casing. The well casing shall be pumped prior to surging to insure that an adequate flow of water is entering the well. Surging shall begin slowly across the entire length of the well screen. The pace of the surging motion shall be gradually increased until the surge block has a vertical velocity of three to five feet per second. Well surging shall be alternated with pumping approximately every 15 minutes during development to clean accumulation of sediment in the well and to allow the on-site geologist to determine the progress of the well development. Development shall continue for a minimum of four hours or until the site geologist determines that the well is adequately developed for sampling purposes. At the end of development, the driller shall clean all sediment from the bottom of the well. Development water shall be pumped into Government furnished drums/containers. Wells with NAPL present may not be developed. The designated Government Representative will make the determination whether to develop wells with NAPL present.



### 3.5 SUPPLEMENTARY BORINGS

Borings abandoned by the Contractor or rejected by the Contracting Officer's Representative for any reason, not the fault of the Government (i.e. misalignment, mechanical failure of the drilling equipment, Contractor negligence, blockage of boring by tools or drilling equipment, etc.) shall be permanently sealed with grout as defined in paragraph 3.3.5 "Grout." A supplementary boring, drilled and completed in accordance with these specifications shall be drilled within a radius of 10 feet from the abandoned boring. The Contracting Officer's Representative will approve the exact location. No payment will be made for borings abandoned by the Contractor or rejected by the Contracting Officer.

### 3.6 CONTAINERIZATION OF INVESTIGATION DERIVED WASTE (IDW) AND SOIL CORES

Drill cuttings brought to the surface during drilling shall be temporarily contained in a Contractor provided dump truck or other vehicle and hauled to a predetermined area at the EGDY. The stockpile of cuttings at EGDY shall be covered with visqueen. Water brought to the surface during drilling shall be contained in Government furnished drums and containers and transferred to a Government provided Baker Tank stationed at the EGDY. Contractor shall use only Government furnished containers for disposal of investigation derived waste and soil cores. Drill cuttings, return water from the drilling operations, and development water shall be containerized. Government furnished 55-gallon drums shall not be filled to more than 75 percent capacity. Drums shall be sealed while in transport from drill site to EGDY. The Contractor shall handle drummed material in a manner to protect the workers and the public in accordance with all applicable Federal, state, and local laws and regulations. The Contractor shall develop, implement, and enforce practices and procedures for safe handling of drums such as minimizing handling and using equipment and procedures that isolate workers from potentially hazardous materials to limit the risks to site personnel and the public.

### 3.7 WELL ACCEPTANCE

It is the responsibility of the Contractor to properly install and develop all monitoring wells according to the requirements of this contract so that they are suitable for the intended purpose. If the Contractor installs wells that are not functional or not in accordance with these specifications, the Contracting Officer will disapprove the well and direct the Contractor to repair or replace it, and to decommission the disapproved well in accordance with this specification.

### 3.8 SITE CLEAN UP

After completion of the work, tools, appliances, surplus materials, temporary drainage, rubbish, and debris incidental to work shall be removed. Slurry, drill cuttings, and other solid or liquid material bailed, pumped, or otherwise removed from the borehole during drilling, well installation, and well development procedures; and fluids from material/equipment decontamination activities shall be containerized in Government furnished containers. Excavation and vehicular ruts shall be backfilled and dressed to conform with the existing landscape. Utilities, structures, roads, fences, or any other pre-existing item which must be repaired or replaced due to the Contractor's negligence will be the responsibility of the Contractor and repair or replacement shall be accomplished prior to completion of this contract.

### 3.9 RECORDS

The Contractor's drill operator shall maintain an accurate and precise chronological daily log of events. The following items shall be included in this daily log:

- (a) beginning of work shift (name of driller, time, date, and location)
- (b) measure static water level at beginning of each shift
- (c) delays in work (times and circumstances)
- (d) any significant occurrence in performing work
- (e) start and stop time of hourly payment items
- (f) equipment failures
- (g) end of shift casing depth and height left above ground surface
- (h) end of work shift (time and date)
- (i) movement to new boring location,
- (j) daily tabulation of quantities for each pay item
- (k) any pertinent comments concerning the daily performance
- (l) soil boring decommissioning methods with material quantities used

Contractor shall furnish a water level measuring device accurate to 0.01 foot and capable of measuring water level to maximum depth of any boring specified in order to accomplish sub-item (b) above.

END OF SECTION

**WAGE DETERMINATION NO: 94-2567 REV (20) AREA: WA,TACOMA**

WAGE DETERMINATION NO: 94-2567 REV (20) AREA: WA,TACOMA  
 REGISTER OF WAGE DETERMINATIONS UNDER | U.S. DEPARTMENT OF LABOR  
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William W. Gross	Division of	Wage Determination No.: 1994-2567
Director	Wage Determinations	Revision No.: 20
		Date Of Last Revision: 07/13/2001

State: Washington  
 Area: Washington Counties of Lewis, Pierce, Thurston

**Fringe Benefits Required Follow the Occupational Listing**	
OCCUPATION TITLE	MINIMUM WAGE RATE
Administrative Support and Clerical Occupations	10.28
Accounting Clerk I	11.54
Accounting Clerk II	13.39
Accounting Clerk III	15.53
Accounting Clerk IV	13.85
Court Reporter	13.36
Dispatcher, Motor Vehicle	10.51
Document Preparation Clerk	11.53
Duplicating Machine Operator	12.67
Film/Tape Librarian	8.57
General Clerk I	9.59
General Clerk II	11.43
General Clerk III	12.58
General Clerk IV	15.92
Housing Referral Assistant	10.27
Key Entry Operator I	11.90
Key Entry Operator II	10.13
Messenger (Courier)	10.63
Order Clerk I	11.60
Order Clerk II	10.68
Personnel Assistant (Employment) I	12.00
Personnel Assistant (Employment) II	13.25
Personnel Assistant (Employment) III	15.33
Personnel Assistant (Employment) IV	14.34
Production Control Clerk	11.48
Rental Clerk	12.79
Scheduler, Maintenance	12.79
Secretary I	13.79
Secretary II	15.95
Secretary III	18.09
Secretary IV	20.77
Secretary V	14.57
Service Order Dispatcher	13.43
Stenographer I	15.26
Stenographer II	15.28
Supply Technician	12.17
Survey Worker (Interviewer)	

Switchboard Operator-Receptionist	10.39
Test Examiner	13.79
Test Proctor	13.79
Travel Clerk I	9.89
Travel Clerk II	10.77
Travel Clerk III	11.59
Word Processor I	11.63
Word Processor II	11.99
Word Processor III	13.42
Automatic Data Processing Occupations	14.33
Computer Data Librarian	13.93
Computer Operator I	15.58
Computer Operator II	16.71
Computer Operator III	18.84
Computer Operator IV	20.93
Computer Operator V	15.08
Computer Programmer I (1)	18.33
Computer Programmer II (1)	25.81
Computer Programmer III (1)	27.50
Computer Programmer IV (1)	23.32
Computer Systems Analyst I (1)	27.62
Computer Systems Analyst II (1)	27.62
Computer Systems Analyst III (1)	13.93
Peripheral Equipment Operator	
Automotive Service Occupations	18.00
Automotive Body Repairer, Fiberglass	16.91
Automotive Glass Installer	16.91
Automotive Worker	18.00
Electrician, Automotive	15.33
Mobile Equipment Servicer	18.00
Motor Equipment Metal Mechanic	16.91
Motor Equipment Metal Worker	18.00
Motor Vehicle Mechanic	15.33
Motor Vehicle Mechanic Helper	16.91
Motor Vehicle Upholstery Worker	16.91
Motor Vehicle Wrecker	17.45
Painter, Automotive	16.91
Radiator Repair Specialist	14.81
Tire Repairer	18.00
Transmission Repair Specialist	
Food Preparation and Service Occupations	11.01
Baker	10.12
Cook I	11.15
Cook II	8.83
Dishwasher	8.83
Food Service Worker	14.51
Meat Cutter	9.27
Waiter/Waitress	
Furniture Maintenance and Repair Occupations	17.45
Electrostatic Spray Painter	15.33
Furniture Handler	17.45
Furniture Refinisher	15.33
Furniture Refinisher Helper	16.37
Furniture Repairer, Minor	16.91
Upholsterer	
General Services and Support Occupations	8.83
Cleaner, Vehicles	9.61
Elevator Operator	11.69
Gardener	8.33
House Keeping Aid I	

House Keeping Aid II	9.61
Janitor	9.61
Laborer, Grounds Maintenance	10.86
Maid or Houseman	8.33
Pest Controller	13.79
Refuse Collector	11.67
Tractor Operator	13.10
Window Cleaner	10.09
Health Occupations	13.23
Dental Assistant	14.79
Emergency Medical Technician (EMT)/Paramedic/Ambulance Driver	11.78
Licensed Practical Nurse I	13.21
Licensed Practical Nurse II	14.79
Licensed Practical Nurse III	12.24
Medical Assistant	13.04
Medical Laboratory Technician	13.06
Medical Record Clerk	13.85
Medical Record Technician	8.37
Nursing Assistant I	8.94
Nursing Assistant II	9.75
Nursing Assistant III	11.52
Nursing Assistant IV	12.52
Pharmacy Technician	13.21
Phlebotomist	16.09
Registered Nurse I	19.68
Registered Nurse II	19.68
Registered Nurse II, Specialist	23.91
Registered Nurse III	23.91
Registered Nurse III, Anesthetist	28.65
Registered Nurse IV	
Information and Arts Occupations	18.00
Audiovisual Librarian	15.41
Exhibits Specialist I	19.04
Exhibits Specialist II	23.31
Exhibits Specialist III	15.41
Illustrator I	19.04
Illustrator II	23.31
Illustrator III	21.02
Librarian	13.24
Library Technician	16.11
Photographer I	18.01
Photographer II	22.25
Photographer III	27.23
Photographer IV	33.06
Photographer V	
Laundry, Dry Cleaning, Pressing and Related Occupations	7.38
Assembler	7.38
Counter Attendant	9.09
Dry Cleaner	7.38
Finisher, Flatwork, Machine	7.38
Presser, Hand	7.38
Presser, Machine, Drycleaning	7.38
Presser, Machine, Shirts	7.38
Presser, Machine, Wearing Apparel, Laundry	10.13
Sewing Machine Operator	10.79
Tailor	8.01
Washer, Machine	
Machine Tool Operation and Repair Occupations	17.53
Machine-Tool Operator (Toolroom)	20.27
Tool and Die Maker	

Material Handling and Packing Occupations	17.65
Forklift Operator	18.25
Fuel Distribution System Operator	12.77
Material Coordinator	12.77
Material Expediter	13.49
Material Handling Laborer	12.87
Order Filler	13.49
Production Line Worker (Food Processing)	12.54
Shipping Packer	12.54
Shipping/Receiving Clerk	14.42
Stock Clerk (Shelf Stocker; Store Worker II)	12.23
Store Worker I	15.33
Tools and Parts Attendant	13.49
Warehouse Specialist	
Mechanics and Maintenance and Repair Occupations	18.00
Aircraft Mechanic	15.33
Aircraft Mechanic Helper	18.57
Aircraft Quality Control Inspector	16.37
Aircraft Servicer	16.91
Aircraft Worker	16.91
Appliance Mechanic	14.81
Bicycle Repairer	20.70
Cable Splicer	18.83
Carpenter, Maintenance	16.91
Carpet Layer	21.22
Electrician, Maintenance	18.85
Electronics Technician, Maintenance I	21.44
Electronics Technician, Maintenance II	23.00
Electronics Technician, Maintenance III	15.33
Fabric Worker	18.00
Fire Alarm System Mechanic	16.37
Fire Extinguisher Repairer	18.00
Fuel Distribution System Mechanic	14.54
General Maintenance Worker	18.00
Heating, Refrigeration and Air Conditioning Mechanic	19.80
Heavy Equipment Mechanic	22.53
Heavy Equipment Operator	22.28
Instrument Mechanic	10.15
Laborer	16.91
Locksmith	20.07
Machinery Maintenance Mechanic	19.10
Machinist, Maintenance	12.47
Maintenance Trades Helper	18.36
Millwright	16.35
Office Appliance Repairer	17.45
Painter, Aircraft	17.45
Painter, Maintenance	20.48
Pipefitter, Maintenance	19.85
Plumber, Maintenance	18.00
Pneudraulic Systems Mechanic	17.45
Rigger	16.35
Scale Mechanic	19.33
Sheet-Metal Worker, Maintenance	16.35
Small Engine Mechanic	18.00
Telecommunication Mechanic I	20.41
Telecommunication Mechanic II	18.00
Telephone Lineman	18.00
Welder, Combination, Maintenance	18.00
Well Driller	17.45
Woodcraft Worker	

Woodworker	16.91
Miscellaneous Occupations	
Animal Caretaker	9.69
Carnival Equipment Operator	11.56
Carnival Equipment Repairer	11.98
Carnival Worker	8.83
Cashier	9.21
Desk Clerk	10.80
Embalmer	22.36
Lifeguard	9.62
Mortician	22.36
Park Attendant (Aide)	12.08
Photofinishing Worker (Photo Lab Tech., Darkroom Tech)	11.06
Recreation Specialist	12.55
Recycling Worker	13.21
Sales Clerk	11.11
School Crossing Guard (Crosswalk Attendant)	11.68
Sport Official	9.62
Survey Party Chief (Chief of Party)	25.90
Surveying Aide	14.35
Surveying Technician (Instr. Person/Surveyor Asst./Instr.)	19.66
Swimming Pool Operator	9.66
Vending Machine Attendant	9.92
Vending Machine Repairer	12.66
Vending Machine Repairer Helper	10.83
Personal Needs Occupations	
Child Care Attendant	9.39
Child Care Center Clerk	12.19
Chore Aid	8.33
Homemaker	13.55
Plant and System Operation Occupations	
Boiler Tender	18.51
Sewage Plant Operator	20.19
Stationary Engineer	19.23
Ventilation Equipment Tender	15.33
Water Treatment Plant Operator	20.19
Protective Service Occupations	
Alarm Monitor	13.03
Corrections Officer	18.00
Court Security Officer	22.90
Detention Officer	22.90
Firefighter	22.32
Guard I	7.03
Guard II	10.28
Police Officer	23.48
Stevedoring/Longshoremen Occupations	
Blocker and Bracer	17.25
Hatch Tender	17.25
Line Handler	17.25
Stevedore I	16.68
Stevedore II	17.83
Technical Occupations	
Air Traffic Control Specialist, Center (2)	27.69
Air Traffic Control Specialist, Station (2)	19.10
Air Traffic Control Specialist, Terminal (2)	21.03
Archeological Technician I	17.72
Archeological Technician II	19.81
Archeological Technician III	24.54
Cartographic Technician	24.74
Civil Engineering Technician	21.28

Computer Based Training (CBT) Specialist/ Instructor	22.25
Drafter I	14.67
Drafter II	16.47
Drafter III	18.59
Drafter IV	23.03
Engineering Technician I	15.93
Engineering Technician II	17.87
Engineering Technician III	20.17
Engineering Technician IV	24.99
Engineering Technician V	30.56
Engineering Technician VI	36.96
Environmental Technician	18.92
Flight Simulator/Instructor (Pilot)	22.97
Graphic Artist	19.35
Instructor	20.01
Laboratory Technician	13.94
Mathematical Technician	16.45
Paralegal/Legal Assistant I	14.95
Paralegal/Legal Assistant II	16.80
Paralegal/Legal Assistant III	18.64
Paralegal/Legal Assistant IV	20.13
Photooptics Technician	17.78
Technical Writer	17.95
Unexploded (UXO) Safety Escort	17.60
Unexploded (UXO) Sweep Personnel	17.60
Unexploded Ordnance (UXO) Technician I	17.60
Unexploded Ordnance (UXO) Technician II	21.29
Unexploded Ordnance (UXO) Technician III	25.52
Weather Observer, Combined Upper Air and Surface Programs (3)	17.42
Weather Observer, Senior (3)	19.37
Weather Observer, Upper Air (3)	17.42
Transportation/ Mobile Equipment Operation Occupations	15.30
Bus Driver	8.95
Parking and Lot Attendant	10.97
Shuttle Bus Driver	10.57
Taxi Driver	16.57
Truckdriver, Heavy Truck	10.97
Truckdriver, Light Truck	16.30
Truckdriver, Medium Truck	16.92
Truckdriver, Tractor-Trailer	

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ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: \$2.02 an hour or \$80.80 a week or \$350.13 a month.

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or success  
eeks after 5 years, and 4 weeks after

15 years. Length of service includes the whole span of continuous service with the  
contractor or successor, wherever  
employed, and with the predecessor contractors in the performance of similar work at  
me Federal facility. (Reg. 29 CFR

4.173)

HOLIDAYS: A minimum of ten paid holidays per year: New Year's Day, Martin Luther Ki  
s Birthday, Washington's Birthday,  
Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving  
nd Christmas Day. (A contractor may  
substitute for any of the named holidays another day off with pay in accordance with  
communicated to the employees

involved.) (See 29 CFR 4.174)

THE OCCUPATIONS WHICH HAVE PARENTHESES AFTER THEM RECEIVE THE FOLLOWING BENEFITS (as  
ed):

1) Does not apply to employees employed in a bona fide executive, administrative, o



ssional capacity as defined and delineated in 29 CFR 541. (See CFR 4.156)

2) APPLICABLE TO AIR TRAFFIC CONTROLLERS ONLY - NIGHT DIFFERENTIAL: An employee is ed to pay for all work performed between the hours of 6:00 P.M. and 6:00 A.M. at the rate of basic pay plus a night p erential amounting to 10 percent of the rate of basic pay.

3) WEATHER OBSERVERS - NIGHT PAY & SUNDAY PAY: If you work at night as part of a r tour of duty, you will earn a night differential and receive an additional 10% of basic pay for any hours worked between d 6am. If you are a full-time employed (40 hours a week) and Sunday is part of your regularly scheduled workweek, paid at your rate of basic pay plus a Sunday premium of 25% of your basic rate for each hour of Sunday work which is not me (i.e. occasional work on Sunday outside the normal tour of duty is considered overtime work).

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees emp n a position that represents a high degree of hazard when working with or in close proximity to ordinance, explosives, a ndiary materials. This includes work such as screening, blending, dying, mixing, and pressing of sensitive ordnance, explo and pyrotechnic compositions such as lead azide, black powder and photoflash powder. All dry-house activities involving ants or explosives.

Demilitarization, modification, renovation, demolition, and maintenance operations o tive ordnance, explosives and incendiary materials. All operations involving regrading and cleaning of artillery A 4 percent differential is applicable to employees employed in a position that repr a low degree of hazard when working with, or in close proximity to ordnance, (or employees possibly adjacent to) explosiv incendiary materials which involves potential injury such as laceration of hands, face, or arms of the employee engaged operation, irritation of the skin, minor burns and the like; minimal damage to immediate or adjacent work area or equip ing used. All operations involving, unloading, storage, and hauling of ordnance, explosive, and incendiary ordnance mater er than small arms ammunition. These differentials are only applicable to work that has been specifically designated by t cy for ordnance, explosives, and incendiary material differential pay.

**\*\* UNIFORM ALLOWANCE \*\***

If employees are required to wear uniforms in the performance of this contract (eith he terms of the Government contract, by the employer, by the state or local law, etc.), the cost of furnishing such unifo maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where suc reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in a ce with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequat r of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform ng and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this w ermination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the f ng of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a \$3.35 per week (or \$.67 cents per

day)). However, in those instances where the uniforms furnished are made of "wash and materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

\*\* NOTES APPLYING TO THIS WAGE DETERMINATION \*\*

Source of Occupational Title and Descriptions:

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations," Fourth Edition, January 1993, as amended by the Third Supplement, dated March 1997, otherwise indicated. This publication may be obtained from the Superintendent of Documents, at 202-783-3238, or by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Copies of special descriptions may also be obtained from the appropriate contracting officer.

REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE (Standard Form F 1444)

Conformance Process:

The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination), be classified by the contractor so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such unlisted classes of employees shall be paid the monetary wages and furnished the fringe benefits as are determined by the conformance process shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees. The conformed classification, wage rate, and/or fringe benefits shall be retroactive to the commencement date of the contract. {See Section 4.6 (C)(vi)} When multiple wage determinations are included in a contract, a separate 1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

- 1) When preparing the bid, the contractor identifies the need for a conformed occupational classification and computes a proposed rate(s).
- 2) After contract award, the contractor prepares a written report listing in order of priority:
  - a) the occupational classification title(s), a Federal grade equivalency (FGE) for each proposed classification(s), job description(s), and the proposed wage rate(s),
  - b) including information regarding the agreement or disagreement of the authorized representative of the employees involved, or, where there is no authorized representative, the employees themselves. This report shall be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs an act of work.
- 3) The contracting officer reviews the proposed action and promptly submits a report to the agency, together with the agency's recommendations and pertinent information including the position of the contractor and its employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).

- 4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disallows the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time is required to process the request.
  - 5) The contracting officer transmits the Wage and Hour decision to the contractor.
  - 6) The contractor informs the affected employees.
- Information required by the Regulations must be submitted on SF 1444 or bond paper. When preparing a conformance request, the "Service Contract Act Directory of Occupations (the Directory) should be used to compare job definitions to insure that duties requested are not performed by a class already listed in the wage determination. Remember, it is not the job title, but the required tasks that determine whether a class is included in an established wage determination. Conformances may not be used to artificially split, combine, or subdivide classifications listed in the wage determination.
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